Considered 2/5/03 MEJ

Beverly Shears

Access DB# 79653

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: My-Chau Tran Examiner #: 78933 Date: 11/7/02
Art Unit: 1639 Phone Number 305-6999 Serial Number: 09/721,569
Mail Box and Bldg/Room Location: CM1, 8A16 Results Format Preferred (circle): (PAPER) DISK E-MAIL
LO3B01

If more than one search is submitted, please prioritize searches in order of need. MEJ

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Drawn microchannel array devices and method of analysis using same.

Inventors (please provide full names): James P. Clarkin; Gary W. Nelson; Robert J. Macomber

Earliest Priority Filing Date: 12/13/2000

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Mrs. Shears;

Please perform the following:

1) Inventors Search
2) Claims 1-3 & 37

Thanks.

Point of Contact:
Beverly Shears
Technical Info. Specialist
CM1 1E05 Tel: 308-4994

****

STAFF USE ONLY Type of Search Vendors and cost where applicable

Tran, M.
09/771569

08nov02 14:23:01 User219783 Session D1884.1

SYSTEM:OS - DIALOG OneSearch
  File 351:Derwent WPI 1963-2002/UD,UM &UP=200271
        (c) 2002 Thomson Derwent
*File 351: Alerts can now have images sent via all delivery methods.
See HELP ALERT and HELP PRINT for more info.
  File 440:Current Contents Search(R) 1990-2002/Nov 07
        (c) 2002 Inst for Sci Info
*File 440: Daily alerts are now available.
  File 16:Gale Group PROMT(R) 1990-2002/Nov 08
        (c) 2002 The Gale Group
*File 16: Alert feature enhanced for multiple files, duplicate
removal, customized scheduling. See HELP ALERT.
  File 34:SciSearch(R) Cited Ref Sci 1990-2002/Nov W2
        (c) 2002 Inst for Sci Info
*File 34: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 2:INSPEC 1969-2002/Nov W1
        (c) 2002 Institution of Electrical Engineers
*File 2: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 8:Ei Compendex(R) 1970-2002/Oct W4
        (c) 2002 Engineering Info. Inc.
*File 8: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 103:Energy SciTec 1974-2002/Oct B2
        (c) 2002 Contains copyrighted material
*File 103: For access restrictions see Help Restrict.
  File 144:Pascal 1973-2002/Nov W1
        (c) 2002 INIST/CNRS
  File 155:MEDLINE(R) 1966-2002/Nov W1
*File 155: For updating information please see Help News155. Alert
feature enhanced with customized scheduling. See HELP ALERT.
  File 73:EMBASE 1974-2002/Nov W1
        (c) 2002 Elsevier Science B.V.
*File 73: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 347:JAPIO Oct 1976-2002/Jun(Updated 021004)
        (c) 2002 JPO & JAPIO
*File 347: JAPIO data problems with year 2000 records are now fixed.
Alerts have been run. See HELP NEWS 347 for details.
  File 5:Biosis Previews(R) 1969-2002/Nov W1
        (c) 2002 BIOSIS
*File 5: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 621:Gale Group New Prod.Annou.(R) 1985-2002/Nov 06
        (c) 2002 The Gale Group
  File 342:Derwent Patents Citation Indx 1978-01/200231
        (c) 2002 Thomson Derwent
*File 342: Updates 200160-200209 replaced. See HELP NEWS 342.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 323:RAPRA Rubber & Plastics 1972-2002/Dec
        (c) 2002 RAPRA Technology Ltd
*File 323: Alert feature enhanced for multiple files, duplicate
removal, customized scheduling. See HELP ALERT.
  File 35:Dissertation Abs Online 1861-2002/Oct
        (c) 2002 ProQuest Info&Learning

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  File   6:NTIS  1964-2002/Nov W1
         (c) 2002 NTIS, Intl Cpyrght All Rights Res
*File   6: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File  98:General Sci Abs/Full-Text  1984-2002/Sep
         (c) 2002 The HW Wilson Co.
  File 399:CA SEARCH(R)  1967-2002/UD=13719
         (c) 2002 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 442:AMA  Journals  1982-2002/Nov B2
         (c)2002 Amer Med Assn -FARS/DARS apply
*File 442: UDs have been adjusted to reflect the current months' data.
No data is missing.
  File  94:JICST-EPlus  1985-2002/Sep W1
         (c)2002 Japan Science and Tech Corp(JST)
  File 266:FEDRIP  2002/Sep
          Comp & dist by NTIS, Intl Copyright All Rights Res
  File 434:SciSearch(R) Cited Ref Sci  1974-1989/Dec
         (c) 1998 Inst for Sci Info
  File  99:Wilson Appl. Sci & Tech Abs  1983-2002/Sep
         (c) 2002 The HW Wilson Co.
  File 160:Gale Group PROMT(R)  1972-1989
         (c) 1999 The Gale Group
  File 370:Science  1996-1999/Jul W3
         (c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
  File 248:PIRA  1975-2002/Nov W2
         (c) 2002 Pira International
*File 248: Changes have been made to Subject Headings and Codes as of
July 2002. See Help Codes248 for a complete list of Subject Headings.
  File  65:Inside Conferences  1993-2002/Nov W1
         (c) 2002 BLDSC all rts. reserv.
  File  67:World Textiles  1968-2002/Oct
         (c) 2002 Elsevier Science Ltd.
  File 315:ChemEng & Biotec Abs  1970-2002/Oct
         (c) 2002 DECHEMA
  File 357:Derwent Biotech Res.  1982-2002/Nov W1
         (c) 2002 Thomson Derwent & ISI
*File 357: File is now current.  See HELP NEWS 357.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 444:New England Journal of Med.  1985-2002/Nov W1
         (c) 2002 Mass. Med. Soc.
  File 322:Polymer Online
         (c) 1990 John Wiley & Sons Inc.
  File 252:Packaging Sci&Tech  1982-1997/Oct
         (c) 1997 by Fraunhofer-ILV, Germany
*File 252: This is a closed file.
  File 172:EMBASE Alert  2002/Nov W1
         (c) 2002 Elsevier Science B.V.

      Set  Items  Description
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Set     Items   Description
S1       3278   (PREFORM? OR PRE(W)FORM?) AND (CHANNEL? OR MICROCHANNEL?)

S4        207   S1 AND SUBSTRATE? ?
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- Key terms Claim. 37

Searcher : Shears 308-4994

S16 24 S4 AND (WAVEGUID? OR WAVE(W)GUID?)
S17 11 RD (unique items)
>>>No matching display code(s) found in file(s): 65, 342

17/3,AB/1 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

014814563
WPI Acc No: 2002-635269/200268
XRAM Acc No: C02-179200
XRPX Acc No: N02-501809
*Microchannel"** array device for analyzing several sample components, has drawn *substrate"** having a length and drawn *channels"** formed in it, the *channels"** extending in direction parallel to the length
Patent Assignee: POLYMICRO TECHNOLOGIES LLC (POLY-N); CLARKIN J P (CLAR-I); MACOMBER R J (MACO-I); NELSON G W (NELS-I)
Inventor: CLARKIN J P; MACOMBER R J; NELSON G W
Number of Countries: 100 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020072111	A1	20020613	US 2000254881	A	20001213	200268 B
			US 2001771569	A	20010130	
AU 200235186	A	20020624	AU 200235186	A	20011213	200268
WO 200248677	A2	20020620	WO 2001US47947	A	20011213	200268

Priority Applications (No Type Date): US 2000254881 P 20001213; US 2001771569 A 20010130
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020072111	A1		25	C12M-001/34	Provisional application US 2000254881
AU 200235186	A			G01N-001/00	Based on patent WO 200248677
WO 200248677	A2	E		G01N-001/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20020072111 A1
Abstract (Basic):
NOVELTY - *Microchannel"** array device (I) has a drawn *substrate"** (10) having a length, and at least two drawn *channels"** (12) formed in it, the *channels"** extending in a direction parallel to the length, and inlets and outlets in cooperating relation with the *channels"**.
DETAILED DESCRIPTION - *Microchannel"** array device (I) has a drawn *substrate"** (10) having a length, and at least two drawn *channels"** (12) formed in it, the *channels"** extending in a direction parallel to the length, and inlets and outlets in cooperating relation with the *channels"**. Optionally (I) comprises an endcap *substrate"** having at least one endcap *channel"** being in fluid communication with one or several of the drawn *channels"** and/or another endcap *channel"**.

INDEPENDENT CLAIMS are included for the following:
(1) a drawn *substrate"** manufactured by providing a *preform"** body having at least one *channel"** and at least one optical *waveguide"** *preform"** in it and extending along a length of the *preform"** body; drawing the *preform"** body to extend its length such that a length of at least one of the *channels"** is extended while substantially maintaining a cross-sectional geometry of the at least one *channel"** and such that a length of the at least one optical *waveguide"** *preform"** is extended while substantially maintaining a cross sectional geometry of the at least one optical *waveguide"** *preform"**; and cutting the drawn *preform"** body to a desired length;
(2) a micro electro mechanical system utilizing (I); and
(3) a lab on a chip system utilizing (I).
USE - (I) is useful for analyzing several sample components (claimed). (I) may be employed in a lab on a chip device.
DESCRIPTION OF DRAWING(S) - The figure shows the drawn *substrate"**.
Drawn *substrate"** (10)
Drawn *channels"** (12)
Face (14)
pp; 25 DwgNo 1/19

17/3,AB/2 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI

014727163
WPI Acc No: 2002-547867/200258
XRAM Acc No: C02-155408
XRPX Acc No: N02-433712
Forming *waveguide"** structure, e.g. splitter, comprises forming light propagating *channel"** in lower cladding, filling light propagating *channel"** with core material, and forming upper cladding over core
Patent Assignee: APPLIED MATERIALS INC (MATE-N)
Inventor: LAW K S; MAK C Y; MAYDAN D; WHITE J M
Number of Countries: 023 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200248766	A2	20020620	WO 2001US47493	A	20011206	200258	B

Priority Applications (No Type Date): US 2000734950 A 20001211
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200248766	A2	E	40	G02B-006/132	

Designated States (National): CN JP KR SG
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Abstract (Basic): WO 200248766 A2
Abstract (Basic):
NOVELTY - A *waveguide"** structure (600) is formed by forming a light propagating *channel"** in a lower cladding (604); filling the light propagating *channel"** with a core material to form a core (602); and forming an upper cladding over the core.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a processing system for fabricating optical devices, comprising a

transfer chamber having a robot, deposition chamber(s) connected to the transfer chamber, and densification chamber connected to the transfer chamber.

USE - For forming a *waveguide"** structure, e.g. splitter, filter, coupler, arrayed *waveguide"** grating, attenuator, multiplexer, de-multiplexer, and/or input/output connection (claimed).

ADVANTAGE - The *waveguide"** structure minimizes the effects of birefringence.

DESCRIPTION OF DRAWING(S) - The figure is a cross-sectional view of a *waveguide"** structure formed on or in a *substrate"**.

*Waveguide"** structure (600)
Core (602)
Lower cladding (604)
*Substrate"** (606)
pp; 40 DwgNo 6/12

17/3,AB/3 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI

014460248
WPI Acc No: 2002-280951/200232
XRAM Acc No: C02-082700
Novel three dimensional internal and external probe carrier for binding a target molecule to a probe, has discrete through well/pillar having an elongated bore/core and defined by interior/exterior
Patent Assignee: GENOSPECTRA INC (GENO-N); CHEN A (CHEN-I); CHEN S (CHEN-I) ; LUO Y (LUOY-I)
Inventor: CHEN A; CHEN S; LUO Y
Number of Countries: 097 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200216651	A2	20020228	WO 2001US26561	A	20010824	200232	B
US 20020055111	A1	20020509	US 2000227896	P	20000825	200235	
			US 2001292069	P	20010517		
			US 2001938798	A	20010824		
AU 200186759	A	20020304	AU 200186759	A	20010824	200247	

Priority Applications (No Type Date): US 2001292069 P 20010517; US 2000227896 P 20000825; US 2001938798 A 20010824
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200216651	A2	E	60	C12Q-001/68	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

US 20020055111	A1	C12Q-001/68	Provisional application US 2000227896
			Provisional application US 2001292069
AU 200186759	A	C12Q-001/68	Based on patent WO 200216651

Abstract (Basic): WO 200216651 A2
Abstract (Basic):
NOVELTY - Novel three-dimensional (3D) internal probe-carrier (PC)

(IPC)/external PC (EPC), where IPC has a discrete through well having elongated bore structure traversing solid support (SS) from one surface to the other and defined by inner side wall, and where EPC has a discrete pillar having an elongated core and defined by exterior side wall on one surface of SS, is new.

DETAILED DESCRIPTION - Novel three-dimensional (3D) internal probe-carrier (PC) (IPC)/external PC (EPC), is new. IPC for binding a target molecule to a probe has SS having two surfaces, at least one discrete through well on SS which comprises an elongated bore structure traversing SS from the one surface to the other and defined by an inner side wall, where each well is individually identifiable by its position on SS, a light conducting region surrounding each well, and specific probe molecules attached to a discrete location on an inner side wall of the well. EPC has a support with a single surface, at lest one discrete pillar on the first surface of the solid support, the pillar comprising an elongated core and defined by at least one exterior side wall, where each pillar is individually identifiable by its position on the solid support, and at least one specific probe molecule attached to exterior side wall of the pillar.

INDEPENDENT CLAIMS are also included for the following:

(1) fabricating a three-dimensional IPC, comprising:

(a) providing a tube *preform"**;

(b) creating an optical *waveguide"** around the through well by providing a light guiding region around the through well bore;

(c) forming a stack of *preforms"** by stacking several *preforms"** in an orderly matrix of a honeycomb or chessboard pattern;

(d) fusing several *preforms"** by heating the *preform"** stack at or near a melting point of the *preform"** material;

(e) extruding one or more *preform"** stacks each that an outer diameter of the *preform"** stack is reduced and an inner diameter of the individual *preform"** is proportionally reduced in a first predetermined size;

(f) further extruding one end of the *preform"** stack so that it is proportionally reduced to a second predetermined size;

(g) introducing probe containing fluid at an end of the *preform"** stack reduced to the first predetermined size and distributing the probe fluid through the entire length of the *preform"** stack; and

(h) cutting the *preform"** stacks into chips or pins; and

(2) fabricating a three-dimensional EPC, comprising:

(a) providing an optical fiber comprising a core and an outer layer;

(b) affixing one or more probes to the outer surface of fiber so that the location of each probe is determinable;

(c) attaching one end of each of one or more fibers to a solid support;

(d) coating each probe-attached fiber with a removable, protective layer so that the fiber is held in place;

(e) attaching an end of each fibers to one another such that one end of the fibers from a bundle while the other loose end is identifiable by an optical fiber; and

(f) establishing the identity of each fiber in the bundled end, and cutting the bundle into individual pillars and removing the protective layer, where the identity of each fiber in the pillar is established;

(3) 3D probe array (II) has a *substrate"** formed of a *substrate"** material, and has multiple probe wells (PWs) having a top and bottom surface, an inner side wall, an opening in the top and bottom surface, where a probe well (PW1) contains probes and light-conducting material (Ia) and a second material (Ib), where (Ia)

and (Ib) are configured such that a light beam launched into the opening of PW1 in the top surface is transmitted by (Ia) and exits the opening of PW1 in the bottom surface;

(4) an array of pillars (III) comprising multiple pillars having proximal ends, distal ends, and side walls, which the proximal ends of the pillars are affixed to a surface of a *substrate"**, and each of the pillars has a probe attached to the sidewalls of the pillars; and

(5) generating or manufacturing (M2) an array of capillaries.

USE - IPC and EPC are useful for binding a target molecule to a probe. IPC is useful for hybridizing a target molecule to a probe, by enabling a flow of hybridization fluid containing the target molecule across and through the elongated bore structure of IPC so that the target molecule is able to contact the probe, and reading a signal resulting from the hybridization. The method can also be performed by using EPC, where the method comprises contacting the probe attached to the exterior side wall of the pillar of EPC, with a hybridization fluid containing the target molecule and reading a hybridization signal resulting from the hybridization. (II)/(III) is useful for binding a target to probes in a probe array and for detecting target molecules bound to probe molecules in the array. M1 is useful for fabricating a three-dimensional IPC or EPC and M2 is useful for generating or manufacturing an array of capillaries. (All claimed).

ADVANTAGE - Novel 3D EPC and IPC increases the economy of reagents, compactness and readability of probe carriers. It is cost effective.

pp; 60 DwgNo 0/13

17/3,AB/4 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI

012989507
WPI Acc No: 2000-161360/200014
XRPX Acc No: N00-120361
Optical *waveguide"** fabricating method using several mechanical processing steps, such as polishing, lapping, dicing, and bonding steps
Patent Assignee: MOLECULAR OPTOELECTRONICS CORP (MOLE-N)
Inventor: LAWRENCE B L; MCCALLION K J; QUANTOCK P R; SCHULZE J L; WAGONER G A
Number of Countries: 087 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200005607	A1	20000203	WO 99US16664	A	19990722	200014 B
AU 9950063	A	20000214	AU 9950063	A	19990722	200029
EP 1097395	A1	20010509	EP 99934179	A	19990722	200128
			WO 99US16664	A	19990722	
US 6270604	B1	20010807	US 98121455	A	19980723	200147
US 20010041040	A1	20011115	US 98121455	A	19980723	200172
			US 2001852334	A	20010509	
KR 2001053567	A	20010625	KR 2001700775	A	20010118	200173
CN 1311864	A	20010905	CN 99809084	A	19990722	200201
AU 745368	B	20020321	AU 9950063	A	19990722	200233
JP 2002521711	W	20020716	WO 99US16664	A	19990722	200261
			JP 2000561520	A	19990722	

Priority Applications (No Type Date): US 98121455 A 19980723; US 2001852334 A 20010509
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200005607	A1	E	31	G02B-006/12	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9950063	A			G02B-006/12	Based on patent WO 200005607
EP 1097395	A1	E		G02B-006/12	Based on patent WO 200005607
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
US 6270604	B1			B32B-031/00	
US 20010041040	A1			G02B-006/122	Cont of application US 98121455 Cont of patent US 6270604
KR 2001053567	A			G02B-006/12	
CN 1311864	A			G02B-006/12	
AU 745368	B			G02B-006/12	Previous Publ. patent AU 9950063 Based on patent WO 200005607
JP 2002521711	W		36	G02B-006/13	Based on patent WO 200005607

Abstract (Basic): WO 200005607 A1

Abstract (Basic):

NOVELTY - *Waveguide"** (10) has a core (12) surrounded by suitable cladding or support *substrate"** (14). The *waveguide"** fabrication includes providing optical material, thinning and polishing optical material to form optical *waveguide"** core having longitudinally extending surfaces. Support surfaces may be attached to the longitudinally extending surfaces of the optical material using an adhesive.

DETAILED DESCRIPTION - The core comprises a high refractive index while the support *substrate"** comprises a low refractive index. Optical material may have an expensive laser crystal, and support *substrate"** may have a low cost glass material, such as fused silica. The optical *waveguide"** is in the form of a *channel"** *waveguide"** having a square cross-section. Optical adhesives are used to bond the core to *preformed"** support *substrates"**.

USE - Optical *waveguide"** fabricated according to this method is used for lasers and amplified spontaneous emission sources for imaging and spectroscopy applications where multimode fibres are used to handle high power, as well as test instrumentation for the telecommunications and cable television.

ADVANTAGE - Method is performed using readily available and inexpensive equipment.

*Waveguide"** (10)

*Waveguide"** core (12)

Support *substrate"** (14)

pp; 31 DwgNo 1/3

17/3,AB/5 (Item 5 from file: 351)

DIALOG(R)File 351:Derwent WPI

002292186

WPI Acc No: 1979-91395B/197951

Optical *wave"** *guide"** *preforms"** - with increased rate of deposition of dopants (NL 11.12.79

Patent Assignee: CORNING GLASS WORKS (CORG)
Inventor: SARKAR A
Number of Countries: 015 Number of Patents: 018
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 2922795	A	19791213				197951	B
GB 2023129	A	19791228				198001	
NL 7904361	A	19791211				198001	
BE 876882	A	19791210				198003	
SE 7904892	A	19800114				198004	
BR 7903533	A	19800122				198006	
DK 7902288	A	19800114				198006	
NO 7901909	A	19800107				198006	
FI 7901843	A	19800131				198009	
FR 2428011	A	19800208				198012	
CA 1128739	A	19820803				198234	
GB 2023129	B	19820915				198237	
DE 2922795	C	19830310				198311	
NL 174539	B	19840201				198409	
CH 642336	A	19840413				198420	
SU 1068028	A	19840115				198436	
AT 7904091	A	19840915				198442	
IT 1193183	B	19880602				199104	

Priority Applications (No Type Date): US 78913754 A 19780608

Abstract (Basic): DE 2922795 A
Optical *wave"** *guides"** are made by leading a stream of glass forming vapour mixt. through a long hollow cylindrical *substrate"** tube. The tube is heated by an arrangement which can be moved relative to the *substrate"** tube producing a suspension of particles which are deposited on the inner surface forming a coherent glassy ppt.
The vapour is introduced via a *channel"** formed between the *substrate"** tube and an inner tube which moves with the heater and ends just upstream of the heated zone.
Used for the mfr. of *preforms"** for optical *wave"** *guide"** fibres. The deposition rate is increased.

17/3,AB/6 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

09083976 Supplier Number: 79197011
39th Annual R&D 100 Awards.(Cover Story)(Industry Overview)
R & D, v43, n9, p29
Sept, 2001
Language: English Record Type: Fulltext
Article Type: Cover Story; Industry Overview
Document Type: Magazine/Journal; Refereed; Trade
Word Count: 23697

17/3,AB/7 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08981969 Supplier Number: 78167384

Hybrid glass *substrate"** technology leads to hybrid *waveguide"** devices.
Cederquist, Sally Cole
Laser Focus World, v37, n8, p37
August, 2001
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 738

17/3,AB/8 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08654138 Supplier Number: 74925621
PRODUCTS OF THE GLASS INDUSTRY.
Glass International, v24, n2, pS126
March, 2001
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 6356

17/3,AB/9 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08654137 Supplier Number: 74925620
GLASS INDUSTRY INDEX.
Glass International, v24, n2, pS37
March, 2001
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 25154

17/3,AB/10 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

06963294 Supplier Number: 58342562
Manufacturers and Suppliers.(Alphabetical list of companies)
Lasers & Optronics, v18, n11, pS8
Nov, 1999
Language: English Record Type: Fulltext
Document Type: Tabloid; Academic Trade
Word Count: 71777

17/3,AB/11 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0290027 DBR Accession No.: 2002-11874 PATENT
Novel three dimensional internal and external probe carrier for binding a target molecule to a probe, has discrete through well/pillar having an elongated bore/core and defined by interior/exterior - bioarray containing probe, useful for hybridization

AUTHOR: CHEN S; CHEN A; LUO Y
PATENT ASSIGNEE: GENOSPECTRA INC 2002
PATENT NUMBER: WO 200216651 PATENT DATE: 20020228 WPI ACCESSION NO.: 2002-280951 (200232)
PRIORITY APPLIC. NO.: US 292069 APPLIC. DATE: 20010517
NATIONAL APPLIC. NO.: WO 2001US26561 APPLIC. DATE: 20010824
LANGUAGE: English
ABSTRACT: DERWENT ABSTRACT: NOVELTY - Novel three-dimensional (3D) internal probe-carrier (PC) (IPC)/external PC (EPC), where IPC has a discrete through well having elongated bore structure traversing solid support (SS) from one surface to the other and defined by inner side wall, and where EPC has a discrete pillar having an elongated core and defined by exterior side wall on one surface of SS, is new. DETAILED DESCRIPTION - Novel three-dimensional (3D) internal probe-carrier (PC) (IPC)/external PC (EPC), is new. IPC for binding a target molecule to a probe has SS having two surfaces, at least one discrete through well on SS which comprises an elongated bore structure traversing SS from the one surface to the other and defined by an inner side wall, where each well is individually identifiable by its position on SS, a light conducting region surrounding each well, and specific probe molecules attached to a discrete location on an inner side wall of the well. EPC has a support with a single surface, at lest one discrete pillar on the first surface of the solid support, the pillar comprising an elongated core and defined by at least one exterior side wall, where each pillar is individually identifiable by its position on the solid support, and at least one specific probe molecule attached to exterior side wall of the pillar. INDEPENDENT CLAIMS are also included for the following: (1) fabricating a three-dimensional IPC, comprising: (a) providing a tube *preform"**; (b) creating an optical *waveguide"** around the through well by providing a light guiding region around the through well bore; (c) forming a stack of *preforms"** by stacking several *preforms"** in an orderly matrix of a honeycomb or chessboard pattern; (d) fusing several *preforms"** by heating the *preform"** stack at or near a melting point of the *preform"** material; (e) extruding one or more *preform"** stacks each that an outer diameter of the *preform"** stack is reduced and an inner diameter of the individual *preform"** is proportionally reduced in a first predetermined size; (f) further extruding one end of the *preform"** stack so that it is proportionally reduced to a second predetermined size; (g) introducing probe containing fluid at an end of the *preform"** stack reduced to the first predetermined size and distributing the probe fluid through the entire length of the *preform"** stack; and (h) cutting the *preform"** stacks into chips or pins; and (2) fabricating a three-dimensional EPC, comprising: (a) providing an optical fiber comprising a core and an outer layer; (b) affixing one or more probes to the outer surface of fiber so that the location of each probe is determinable; (c) attaching one end of each of one or more fibers to a solid support; (d) coating each probe-attached fiber with a removable, protective layer so that the fiber is held in place; (e) attaching an end of each fibers to one another such that one end of the fibers from a bundle while the other loose end is identifiable by an optical fiber; and (f) establishing the identity of each fiber in the bundled end, and cutting the bundle into individual pillars and removing the protective layer, where the identity of each fiber in the pillar is established; (3) 3D probe array (II) has a *substrate"** formed of a *substrate"** material, and has multiple probe wells (PWs) having a top and bottom surface, an inner side wall, an opening in the top and bottom surface, where a probe well (PW1) contains probes and light-conducting material (Ia) and a second

material (Ib), where (Ia) and (Ib) are configured such that a light beam launched into the opening of PW1 in the top surface is transmitted by (Ia) and exits the opening of PW1 in the bottom surface; (4) an array of pillars (III) comprising multiple pillars having proximal ends, distal ends, and side walls, which the proximal ends of the pillars are affixed to a surface of a *substrate"**, and each of the pillars has a probe attached to the sidewalls of the pillars; and (5) generating or manufacturing (M2) an array of capillaries. BIOTECHNOLOGY - Preferred Probe-carrier: In IPC, several different probes are attached to the inner side wall of SS at a density exceeding 100 preferably 500 different probes/square millimeter and EPC probes attached to the inner side wall of SS is preferably at a density exceeding 100 or 1000 different probes/square mm, where SS is from optical fiber, glass, silicon, polymer, plastic, ceramics and metal. The through well further comprising a light conduction region surrounding the elongated bore structure traversing SS, where the bore structure open at both the surfaces of SS, where one of the surface of SS is bonded to a second planar SS so that the bore structure is open at one surface and closed at the other surface. The probe is preferably form DNA, RNA, synthetic polynucleotides, oligonucleotides, antibodies, proteins, polypeptides, peptides, lectins, oligosaccharides,modified polysaccharides, synthetic composite macromolecules, functionalized nanostructures, synthetic polymers, modified or blocked nucleotides and nucleosides, modified or blocked amino acids, fluorophores, chromophores, ligands, chelates, haptens, drug compounds, cell receptors, lipids, cells, or combinations of these structures, or any other structures to which the target molecule or portions of the target molecule binds with specificity. IPC further comprises a chamber for a fluid containing the probe molecule which is preferably frozen by lyophilization, where the fluid is confined within the discrete well structure by capillary forces, and a protective film (polymer or metallic film) attached to at least one of surfaces of SS, where the surface of the film in contact with SS is hydrophobic. The inner wall surface of the bore structure is hydrophilic. In EPC, the pillars are in the form of short pins or rods arranged as a matrix on a planar SS so that the pattern and pitch of the matrix corresponds to a microtiter plate. Preferred Array: In (II), (Ia) has a refractive index (RI1) and (Ib) has a refractive index (RI2) that is less than RI1 so that PW1 forms a light-conducting *waveguide"**, and (Ia) preferably comprises a liquid in fluid contact with the inner side wall of PW1 and (Ib) comprises the side wall, or alternatively (Ia) comprises a first portion of PW1 that includes the inner side wall and (Ib) comprises a portion of the *substrate"** or comprises a second portion of PW1 bound by first portion and an outer side wall of PW1, where (Ia) comprises silica doped with an impurity that increases RI of silica and a second portion comprises silica having a lower RI that the first portion. PWs comprises multiple capillaries bound together to form a bundle is an unordered or ordered bundle and the *substrate"** comprises a binder that holds the capillaries together, where the binder comprises epoxy, silica, metal band, a plate having through-holes through which the capillaries pass, or a plate to which each of the bottom surfaces of PWs is attached. The opening in the top surface and bottom surface of PW1 form a portion of a *channel"** through PW1, where the *channel"** has a length and which *channels"** has a cross-sectional area that is essentially constant or decreases along the length of the *channel"**. (II) further comprises a base plate to which bottom surface of PW1 is attached and the probe wells are distributed across the *substrate"** at a density greater than 400 probe wells/square cm, the probe comprise

biological and chemical samples. In (III), the surface of the *substrate"** is planar or is a rod having two ends and sidewall, where the surface of the *substrate"** comprises the sidewalls, where the distal end of each pillar is free of biological and chemical sample and the longest axis of each pillar is less than 200 micro-m, and the pillars are distributed across the *substrate"** at a density greater than 400 pillars/square cm of *substrate"** surface, where each pillar have an electrically conductive core and are light-conducting pillars. Preferred Method: M1 further comprises registering the proximal ends of capillaries to the distal ends preferably by launching light in to a distal end of a first capillary, observing the light exiting a proximal end of the first capillary and recording information that correlates the distal end of the first capillary to the proximal end of the first capillary, and the *channel"** of each capillaries coated with a material so that the coating reflex light within the *channel"**. USE - IPC and EPC are useful for binding a target molecule to a probe. IPC is useful for hybridizing a target molecule to a probe, by enabling a flow of hybridization fluid containing the target molecule across and through the elongated bore structure of IPC so that the target molecule is able to contact the probe, and reading a signal resulting from the hybridization. The method can also be performed by using EPC, where the method comprises contacting the probe attached to the exterior side wall of the pillar of EPC, with a hybridization fluid containing the target molecule and reading a hybridization signal resulting from the hybridization. (II)/(III) is useful for binding a target to probes in a probe array and for detecting target molecules bound to probe molecules in the array. M1 is useful for fabricating a three-dimensional IPC or EPC and M2 is useful for generating or manufacturing an array of capillaries. (All claimed). ADVANTAGE - Novel 3D EPC and IPC increases the economy of reagents, compactness and readability of probe carriers. It is cost effective.(60 pages)

Set	Items	Description
S18	49	S1 AND (WAVEGUID? OR WAVE(W)GUID?)(5N)OPTICAL?
S19	36	S18 NOT S16
S20	26	RD (unique items)

>>>No matching display code(s) found in file(s): 65, 342

20/3,AB/1 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

014518871
WPI Acc No: 2002-339574/200237
XRPX Acc No: N02-267018
*Optical"** *wave"** *guides"** in the form of polymer *optical"** fibres comprises of one longitudinally extending light guiding core region and core surrounding region composed of a polymeric material, has number of light confining elements
Patent Assignee: UNIV SYDNEY (UNSY)
Inventor: BASSETT I; FLEMING S; SCEATS M; VAN EIJKELENBORG M
Number of Countries: 096 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200216984	A1	20020228	WO 2001AU891	A	20010720	200237	B
AU 200172230	A	20020304	AU 200172230	A	20010720	200247	

Priority Applications (No Type Date): AU 20009688 A 20000825

Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200216984 A1 E 24 G02B-006/16
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200172230 A G02B-006/16 Based on patent WO 200216984

Abstract (Basic): WO 200216984 A1
Abstract (Basic):

NOVELTY - The *optical"** *wave"** *guide"** in the form of an *optical"** fibre (10) comprises at least one longitudinally extending light guiding core region (11). This is composed of at least in part of a polymeric material, a longitudinally extending core-surrounding region (12) composed of a polymeric material, and a plurality of light confining elements (15), such as, for example, *channel"**-like holes, located within the core surrounding region.

DETAILED DESCRIPTION - The light confining elements extend in the longitudinal direction of the core region and are distributed about the core region.

An INDEPENDENT CLAIM is made for a *pre"**-*form"** for use in the manufacture of an *optical"** *wave"**-*guide"**.

USE - *Optical"** *wave"** *guides"** in the form of polymer *optical"** fibres.

ADVANTAGE - The majority of the light confining elements have a refractive index less than that of the polymeric material from which the core-surrounding region is composed. A *pre"**-*form"** is also provided for use with the manufacture of the *optical"** *wave"** *guide"**. Provides for the maintenance of single-mode transmission with the option of using a large mode area, without the fibre being vulnerable to bending losses.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section of the optical fibre.

Optical fibre (10)
Light guiding core region (11)
Extending core-surrounding region (12)
Light confining elements (15)
pp; 24 DwgNo 1/7

20/3,AB/2 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI

014127251
WPI Acc No: 2001-611461/200170
XRAM Acc No: C01-182697
XRPX Acc No: N01-456437
Planar waveguide used in e.g. lasers comprises Group I element in tin-doped silica glass matrix
Patent Assignee: UNIV SOUTHAMPTON (UYSO-N)
Inventor: BRAMBILLA G; PRUNERI V; REEKIE L
Number of Countries: 095 Number of Patents: 002
Patent Family:
Patent No Kind Date Applicat No Kind Date Week

WO 200170640 A1 20010927 WO 2001GB1218 A 20010320 200170 B
AU 200140908 A 20011003 AU 200140908 A 20010320 200210

Priority Applications (No Type Date): US 2000195305 P 20000410; EP 2000302381 A 20000323
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200170640 A1 E 28 C03C-004/04
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200140908 A C03C-004/04 Based on patent WO 200170640

Abstract (Basic): WO 200170640 A1
Abstract (Basic):

NOVELTY - An *optical"** *waveguide"** has a *waveguiding"** *channel"** of photosensitive glass with a modified refractive index optically written therein. The photosensitive glass comprises oxides of silicon, tin and Group I element(s).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of fabricating an *optical"** *waveguide"** involving providing a photosensitive glass doped with tin as a photosensitizing dopant and a Group I element as a dopant for increasing the solubility of tin, and exposing regions of the photosensitive glass to a refractive index change inducing optical radiation. The exposed regions provide a light-guiding core of raised refractive index within the photosensitive glass.

USE - The waveguide is used in grating (preferably chirped) for dispersion compensator and Bragg reflector which is in turn used in laser or sensor (all claimed). It is also used in amplifiers.

ADVANTAGE - Inclusion of the Group I element increases the solubility of tin in the oxide up to 20 times the 1 mol% limit of the silicon oxide:tin oxide compound, thus allowing larger refractive index modulations to be achieved. The *waveguide"** is highly photosensitive. It produces *optically"** written refractive index modulations having remarkable temperature stability. Because of this stability, devices made of the waveguide are more robust to intrinsic absorption, multi-photon absorption, and high temperatures. The invention does not cause any increase in the background refractive index, allowing the manufacture of waveguide devices to be compatible with standard telecommunication fibers. It also reduces the effects related to high volatility of tin during *preform"** collapse.

pp; 28 DwgNo 0/10

20/3,AB/3 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI

013957620
WPI Acc No: 2001-441834/200147
XRAM Acc No: C01-133572
*Optical"** *waveguide"** fiber manufacturing device includes temperature monitor with heat flux sensors for non-contact measurement of average temperature of *optical"** *waveguide"** fiber being drawn

Patent Assignee: TERRELL J P (TERR-I); CORNING INC (CORG)
Inventor: TERRELL J P
Number of Countries: 022 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200149618	A1	20010712	WO 2000US35440	A	20001222	200147 B
US 6408651	B1	20020625	US 99174009	A	19991230	200246
			US 2000489557	A	20000121	
US 20020116954	A1	20020829	US 99174009	A	19991230	200259
			US 2000489557	A	20000121	
			US 2002132810	A	20020424	

Priority Applications (No Type Date): US 2000489557 A 20000121; US 99174009 P 19991230; US 2002132810 A 20020424
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200149618	A1	E	34	C03B-037/029	
Designated States (National): JP KR					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
US 6408651	B1			C03B-037/07	Provisional application US 99174009
US 20020116954	A1			C03B-037/07	Provisional application US 99174009
					Div ex application US 2000489557
					Div ex patent US 6408651

Abstract (Basic): WO 200149618 A1
Abstract (Basic):

NOVELTY - An *optical"** *waveguide"** fiber manufacturing device has temperature monitor for non-contact measurement of an average temperature of an *optical"** *waveguide"** fiber being drawn from a heated *optical"** *waveguide"** *preform"**.

The temperature monitor has thermally isolated chamber, heat flux sensors, i.e. differential thermopiles, for measuring heat flux radiated by the *optical"** *waveguide"** fiber, and cooling system.

DETAILED DESCRIPTION - An *optical"** *waveguide"** fiber manufacturing device includes a draw furnace heated to a draw temperature, an *optical"** *waveguide"** *preform"** positioned within the draw furnace, and a temperature monitor for non-contact measurement of an average temperature (Tf) of an *optical"** *waveguide"** fiber being drawn from the heated *optical"** *waveguide"** *preform"**. The temperature monitor includes a thermally isolated chamber for receiving the waveguide fiber being drawn, heat flux sensors (120) for measuring heat flux radiated by the *optical"** *waveguide"** fiber, and a cooling system in thermal contact with the side walls of the chamber. The waveguide *preform"** is heated to the draw temperature. The temperature monitor is in alignment with the draw furnace. The cooling system is adapted to maintain a reference surface temperature (Ts) of each heat flux sensor.

INDEPENDENT CLAIMS are also included for:

(A) a method of manufacturing an *optical"** *waveguide"** involving heating the *optical"** *waveguide"** *preform"** to a draw temperature, drawing an *optical"** *waveguide"** fiber from the *preform"**, providing a heat flux chamber, passing the drawn *optical"** *waveguide"** fiber through the chamber, and non-optically measuring the heat flux radiated by the *optical"** *waveguide"** fiber within the chamber; and

(B) a method of measuring Tf of an *optical"** *waveguide"** fiber

involving passing the *optical"** *waveguide"** fiber through a chamber, maintaining Ts of one surface of each differential thermopile, and generating an aggregate output signal representative of the radiant energy absorbed by the differential thermopiles.

Preferred Features: The temperature monitor includes differential thermopiles (120) in the inside surface of the chamber sidewalls. A first surface of each thermopile is thermally isolated from a second surface. Each first surface faces the central *channel"** of the chamber and has a dark absorptive surface. They are exposed to heat flux. The second surface is in thermal contact with the side walls of the chamber. The second surface has a reference surface temperature of Ts.

USE - For manufacturing *optical"** *waveguide"** fibers, particularly silica *optical"** *waveguides"**.

ADVANTAGE - The device minimizes any stray radiation and/or ambient temperature changes from affecting the temperature measurement of the *optical"** *waveguide"**. It does not require prior knowledge of the emissivity of the object. It is rugged and capable of withstanding high temperatures. It consistently provides accurate average temperature measurement and has a fast response time. It is inexpensive to manufacture.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective interior view of the *optical"** *waveguide"** temperature monitor.

Heat flux sensors or thermopiles (120)

pp; 34 DwgNo 2/6

20/3,AB/4 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI

012757437
WPI Acc No: 1999-563556/199948
Related WPI Acc No: 1996-457426; 1998-086519; 1999-563555; 2000-023533
XRAM Acc No: C99-164561
XRPX Acc No: N99-416514
Dispersion-controlled *optical"** *waveguide"** fiber limiting power penalty due to four-wave mixing
Patent Assignee: CORNING INC (CORG)
Inventor: BERKEY G E
Number of Countries: 008 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 949520	A1	19991013	EP 96105573	A	19960409	199948	B
			EP 99107335	A	19960409		

Priority Applications (No Type Date): US 96584868 A 19960111; US 95423656 A 19950413
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 949520	A1	E	30	G02B-006/16	Div ex application EP 96105573
					Div ex patent EP 737873

Designated States (Regional): CH DE DK FR GB IT LI NL

Abstract (Basic): EP 949520 A1
Abstract (Basic):
NOVELTY - The dispersion managed single-mode *optical"** *waveguide"** fiber has cladding and core glass regions, the core

blast wave, with further cooling due to expansion work.
In addition, time- and space-resolved measurements of the electron density profiles of a laser-driven concentric implosion were performed for the first time to our knowledge. The implosion was the result of the interaction of a second line-focused laser pulse with an existing plasma waveguide. The two-pulse absorption and ionization significantly exceeded that due to a single pulse of the same total energy, with the second pulse being almost completely absorbed when the initial waveguide was allowed to expand and cool. The observed end-coupled guided pulse transmission showed a prompt enhancement due to the increased barrier height and thickness. The laser-driven hydrodynamic response of the plasma (compression and relaxation waves) resulted in additional guided mode control over the delay method for single-pulse created waveguides.

20/3,AB/26 (Item 1 from file: 370)
DIALOG(R)File 370:Science

00507101
Effects of Random Perturbations in Plastic Optical Fibers
Garito, A. F.; Wang, J.; Gao, R.
The authors are in the Department of Physics and Astronomy, University of Pennsylvania, Philadelphia, PA 19104, USA.
Science Vol. 281 5379 pp. 9625
Publication Date: 8-14-1998 (980814) Publication Year: 1998
Document Type: Journal ISSN: 0036-8075
Language: English
Section Heading: Control and Use of Defects in Materials
Word Count: 5157

Abstract: REVIEW
The most important feature of an *optical"** fiber *waveguide"** is its bandwidth, which defines its information-carrying capacity. A major limitation on the bandwidth of multimode glass and plastic optical fibers is modal dispersion, in which different optical modes propagate at different velocities and the dispersion grows linearly with length. However, in plastic optical fibers, experimental and theoretical results indicate that the modes are not independent but are highly coupled, which leads to a characteristic square-root length dependence and an unanticipated large enhancement of the bandwidth to gigahertz levels. The ever increasing demands for low-cost, high-bandwidth communications media for voice, video, and data transmission in short-and medium-distance applications are generating a new assessment of multimode optical fibers to serve as high-speed fiber links

Set	Items	Description
S21	40932	PLATE? ? AND THROUGH(W)HOLE? ?
S22	3035	S21 AND GROOV?
S23	283	S22 AND THICK?
S24	236	S22 AND THICKNESS?
S25	34	S24 AND PARALLEL?
S27	34	S25 NOT (S16 OR S19)
S28	33	RD (unique items)

Claims 1-3

>>>No matching display code(s) found in file(s): 65, 342

28/3,AB/1 (Item 1 from file: 351)

014650636
WPI Acc No: 2002-471340/200250
Related WPI Acc No: 2002-204856
XRAM Acc No: C02-133989
Producing platens for polymorphism analysis, involves bonding *plates"** having *parallel"** *grooves"** on their upper and lower surfaces
Patent Assignee: BIOTROVE INC (BIOT-N); BRENAN C (BREN-I); HESS R A (HESS-I); KANIGAN T S (KANI-I); LINTON J (LINT-I); OZBAL C (OZBA-I)
Inventor: BRENAN C; HESS R A; KANIGAN T S; LINTON J; OZBAL C; BRENAN C J H; LINTON J D
Number of Countries: 096 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200230561	A2	20020418	WO 2001US31770	A	20011010	200250	B
US 20020094533	A1	20020718	US 2000239538	A	20001010	200254	
			US 2001268894	A	20010214		
			US 2001284710	A	20010418		
			US 2001975496	A	20011010		
AU 200196809	A	20020422	AU 200196809	A	20011010	200254	

Priority Applications (No Type Date): US 2001284710 P 20010418; US 2000239538 P 20001010; US 2001268894 P 20010214; US 2001975496 A 20011010
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200230561	A2	E	135	B01J-019/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
US 20020094533	A1			C12Q-001/68	Provisional application US 2000239538
					Provisional application US 2001268894
					Provisional application US 2001284710
AU 200196809	A			B01J-019/00	Based on patent WO 200230561

Abstract (Basic): WO 200230561 A2
Abstract (Basic):
NOVELTY - Several *plates"** having continuous, *parallel"** *grooves"** on the upper and lower surfaces, are bonded together to form a *platen"** with several *through"**-*holes"**. The *platen"** is sliced along perpendicular direction of *through"**-*holes"**, to achieve desired *thickness"**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) probes communication device;
(2) a *platen"**;
(3) hydrophobic coating regeneration method;
(4) coating formation method;
(5) chemical array creation method;
(6) chemical array;
(7) sample separation method;
(8) spatially addressable array creation method;
(9) stochastic array creation method;

(10) reagent combination identification method;
(11) *platen"** loading method;
(12) aerobic organism viability maintaining method;
(13) volatile samples mixing method;
(14) sample array mixing method;
(15) reagent transferring method;
(16) *through"**-*holes"** filling device;
(17) reaction kinetics analyzing method;
(18) sample physical property analyzing method;
(19) sample output measuring method;
(20) samples storing method;
(21) high through-put array formation method; and
(22) filtration device.

USE - For making platens (claimed) used in genomics, proteomics, genotyping, polymorphism analysis, examination of RNA expression profiles in cells, hybridization, recombinant enzyme discovery, drug discovery and protein crystallization.

ADVANTAGE - Provides platens with straight-walled *through"**-*holes"** which are much deeper than those made by micro-machining technology.

DESCRIPTION OF DRAWING(S) - The figure shows an exploded top corner view of a *platen"**.

*Platen"** (1, 2, 3)
*Through"** *Holes"** (4)
pp; 135 DwgNo 1/24

28/3,AB/2 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI

011754324
WPI Acc No: 1998-171234/199816
XRPX Acc No: N98-136069
Integrated dielectric substrate, particularly substrate equipped with dissipating *plate"** for exothermic element - has dissipating *plate"** for dissipating heat generated by exothermic element mounted above surface of dielectric substrate having either cavity or *groove"** cut through surface
Patent Assignee: MURATA MFG CO LTD (MURA)
Inventor: SUZAKI H
Number of Countries: 025 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 831530	A2	19980325	EP 97116386	A	19970919	199816	B
JP 10098138	A	19980414	JP 96269236	A	19960919	199825	
US 5995371	A	19991130	US 97933484	A	19970918	200003	
JP 3185682	B2	20010711	JP 96269236	A	19960919	200140	

Priority Applications (No Type Date): JP 96269236 A 19960919
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 831530	A2	E	11	H01L-025/065	
Designated States (Regional): AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI					
JP 10098138	A		7	H01L-023/36	
US 5995371	A			H05K-007/20	
JP 3185682	B2		7	H01L-023/36	Previous Publ. patent JP 10098138

Abstract (Basic): EP 831530 A

The exothermic element (5) and integrated dielectric substrate (1) comprises a dissipating *plate"** (3) for heat generated by the exothermic element mounted above a surface of the dielectric substrate, having a *groove"** (12) cut in it, and having the dissipating *plate"** fitted in the *groove"** and with its ends extending beyond the dielectric substrate to form extending end portions (16). The exothermic element is mounted on the dissipating *plate"** lying on the dielectric substrate across a portion containing the cavity with a portion of the dissipating *plate"** corresponding to the position of the cavity (14) being concavely bent so as to fit in the cavity.

The extending end portions (16) of the dissipating *plate"** (3) are bent along the *thickness"** direction of the dielectric substrate toward the bottom face of the dielectric substrate, and then, bent outward in *parallel"** with the bottom face of the dielectric substrate to form *parallel"** bent portions (17) so that the bottom faces of the *parallel"** bent portions are coplanar with the bottom face of the dielectric substrate. The dissipating *plate"** is composed of a top *plate"** (25,26) and a pair of L-shaped legs (21) respectively fixed to ends of the top *plate"** and bottom faces of horizontal portions (22) of the L-shaped legs are coplanar with the bottom face of the dielectric substrate.

ADVANTAGE - No *through"** *hole"** is required for dielectric substrate and *groove"** or concave portion is only formed on top face of dielectric substrate. In multi-layered structure, entire surface can be used for circuit formation, and regions for circuit pattern formation can be enlarged, and overall size of integrated dielectric substrate can be reduced.

Dwg.1/8

28/3,AB/3 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI

011419826
WPI Acc No: 1997-397733/199737
XRPX Acc No: N97-330991

Thick film pattern formation for plasma display panel - by setting width and height of *groove"** under mask *plate"** from which paste is discharged to glass substrate *through"** *hole"**, corresponding to width and *thickness"** of desired film coating

Patent Assignee: DAINIPPON PRINTING CO LTD (NIPQ)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 9173942	A	19970708	JP 95334959	A	19951222	199737	B

Priority Applications (No Type Date): JP 95334959 A 19951222
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9173942	A		4		

Abstract (Basic): JP 9173942 A

The method involves moving a mask *plate"** (11) above a glass substrate (20) in the same direction with a *groove"** (13) formed on

the underside surface of the mask *plate"**. Paste (P) contained on the mask *plate"** is discharged on the glass substrate through a hole (14) opened through the mask *plate"**.

The width and height of the *groove"** is set corresponding to the required width and *thickness"** of the paste. The thick film coating of the paste is done in a *parallel"** state. The paste is heated to form a *parallel"** thick film pattern.

ADVANTAGE - Obtains desired size of thick film pattern through single operation. Produces thick film pattern through simple method at low cost.

Dwg.2/5

28/3,AB/4 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI

010294354
WPI Acc No: 1995-195614/199526
XRPX Acc No: N95-153531
Deformable spacing support buffer for raising road barrier on impact - comprises steel *plate"** bent to form slanting irregular section with weakened fixings and is fitted between barrier rail and support post
Patent Assignee: AUTOSTRADE CONCESSIONI & CONST (AUTO-N); AUTOSTRADE CONCESSIONI & COSTR AUTOSTRAD (AUTO-N)
Inventor: BOTTO M; CAMOMILLA G; FABBRI A
Number of Countries: 019 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 655534	A1	19950531	EP 94830404	A	19940812	199526	B
IT 1262460	B	19960619	IT 93RM788	A	19931126	199707	
EP 655534	B1	19980729	EP 94830404	A	19940812	199834	
DE 69412042	E	19980903	DE 612042	A	19940812	199841	
			EP 94830404	A	19940812		
ES 2122215	T3	19981216	EP 94830404	A	19940812	199906	

Priority Applications (No Type Date): IT 93RM788 A 19931126
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 655534	A1	E	7	E01F-015/04	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE LI LU MC NL PT SE					
EP 655534	B1	E		E01F-015/04	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE LI LT LU MC NL PT SE SI					
DE 69412042	E			E01F-015/04	Based on patent EP 655534
ES 2122215	T3			E01F-015/04	Based on patent EP 655534
IT 1262460	B			E01F-000/00	

Abstract (Basic): EP 655534 A

The rising spacer (1) is bolted (5') *through"** *holes"** (15a,15b) to the road barrier support post (4) and by bolts (5) *through"** *holes"** (14a,14b) to an Armco (RTM) type profiled steel barrier rail (6). The spacer comprises a deformable *parallelogram"** buffer element (7) bent from steel *plate"** and squared off by two welded (10,11) steel *plate"** supports (8,9).

The supports are *grooved"** (12,13) to initiate deformation in the desired direction on impact and to cause the rail side of the spacer

element (7) to collapse upwards. The *thickness"** and quality of steel *plates"** is chosen for optimum deforming performance. The portion (18) may be omitted.

USE/ADVANTAGE - A simple and comparatively low cost method of ensuring that a road barrier rail will rise on impact to reduce the danger of a vehicle over-riding into an adjacent carriageway or bridge abutment.

Dwg.1,2/4

28/3,AB/5 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI

009399680
WPI Acc No: 1993-093189/199311
XRPX Acc No: N93-071396

Switching device structure for electrical connector - has each terminal configured as flat connecting *plate"** between two connecting heads, which fit in *through"**-*holes"** of *plate"** slots in the insulating bodies

Patent Assignee: JU T (JUTT-I)
Inventor: JU T
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5190481	A	19930302	US 90490707	A	19900307	199311	B

Priority Applications (No Type Date): US 90490707 A 19900307
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5190481	A		5	H01R-027/02	

Abstract (Basic): US 5190481 A

The connector has a number of terminals, each comprising a flat connecting *plate"** (21) defining a first plane and two connecting heads (22) extending from opposing edges of the *plate"**. The two connecting heads have respective axes extending *parallel"** to the first plane and *parallel"** to each other. The two insulating respectively have confronting first (11) and second flat surfaces defining a second plane between them which is perpendicular to the first plane. The first insulator has a number of *grooves"** (12), each receiving the first connecting head and a portion of the connecting *plate"** one of said plurality of terminals. The second insulator has a number of *grooves"**, confronting the first set and formed in the second generally flat surface, each receiving the second connecting head.

The first insulator has a number of *through"**-*holes"** (14) extending respectively from the first *grooves"** to a third flat surface, (13) each *through"**-*hole"** receiving a first connecting head. The second insulator has *through"**-*holes"** (14) extending respectively from the second *grooves"** to a fourth flat surface (13).

ADVANTAGE - Reduced relative size. Simplified prodn. process. Improved insulation effect by reducing horizontal space of plastic members and increasing insulator *thickness"**.

Dwg.4/7

28/3,AB/6 (Item 6 from file: 351)
DIALOG(R)File 351:Derwent WPI

008189727
WPI Acc No: 1990-076728/199011
XRPX Acc No: N90-058967
Floor slab with chipboard upper surface - has lower insulating and ventilating layers of foamed plastics in *plate"** under chipboard panel
Patent Assignee: MANG J (MANG-I)
Inventor: MANG J
Number of Countries: 007 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 357921	A	19900314	EP 89113335	A	19890720	199011	B
EP 357921	B	19910724				199130	
DE 58900191	G	19910829				199136	

Priority Applications (No Type Date): DE 88U10712 U 19880824
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 357921	A	G	10		
Designated States (Regional): AT BE CH DE FR LI NL					
EP 357921	B				
Designated States (Regional): AT BE CH DE FR LI NL					

Abstract (Basic): EP 357921 A
The floor slab has its upper surface formed by a chipboard panel (1). A layer (2) of insulation is mounted immediately below the chipboard panel and a ventilation layer (3) is formed below the insulation layer. Both the insulation and ventilation layers are made from foamed plastics.
The ventilation layer has *parallel"** *grooves"** (5) in its upper surface, and *parallel"** *grooves"** (4) in its lower surface at right angles to those in the upper surface. The depth of the *grooves"** is such that at their intersect ion joint, a *through"** *hole"** (9) is formed. Shallow *grooves"** are also formed across the ridges between the *grooves"**.
ADVANTAGE - Reduced humidity transfer, increased air circulation and selective plastics foam *plate"** *thickness"**.
1/7

Abstract (Equivalent): EP 357921 B
Floor element having on its upper face a wearing surface in the form of a chipboard sheet (1) and on its lower surface a board of foamed synthetic resin as an insulating and ventilating layer (2,3) which has on its upper and lowe faces mutually identical and *parallel"** continuous *grooves"** (4,5) extending from edge to edge, and webs forming engaging surfaces (14,15) between the *grooves"**, characterised in that the board of foamed synthetic resin is divided in the horizontal plane into an insulating layer (2) and a ventilating layer (3), that furthermore the *grooves"** (4) in the lower face of the ventilating layer (3) intersect the *grooves"** (4) on the upper face of the ventilating layer (3) and the *grooves"** (4,5) on both faces cut through the horizontal central plane (8) of the ventilating layer (3) to a depth of 2 to 4 mm, with the formation of windows (9) between the *grooves"** (4) on the lower face and the *grooves"** (5) on the upper face, and that recesses (16) are cut in the engaging surfaces (14) of the webs (6) between the *grooves"** (4) of the lower

face of the ventilating layer (3) the recesses being in the direction of and vertically aligned with the webs (7) between the *grooves"** (5) on the upper face, and equally recesses (17) are out in the engaging surface (15) of the webs (7) between the *grooves"** (5) on the upper face of the ventilating layer (3), which are aligned in the direction of and vertically aligned with the webs (6) on the lower face. (10pp)

28/3,AB/7 (Item 7 from file: 351)
DIALOG(R)File 351:Derwent WPI

007963779
WPI Acc No: 1989-228891/198932
XRPX Acc No: N89-174631
Orientation *plate"** placing front panel switches in *parallel"** - has matching recess and projecting flange at opposite ends allowing two *plates"** to be mated
Patent Assignee: ELEKTRO-APP OLTEN A (OLTE-N); ELEKTRO-APP OLTEN A (ELEK-N); ELEK APP OLTEN AG (ELOL-N)
Inventor: BERGER F
Number of Countries: 014 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 326808	A	19890809	EP 89100198	A	19890107	198932	B
JP 1232616	A	19890918	JP 8923647	A	19890201	198943	
CH 675795	A	19901031				199046	
EP 326808	B	19920325	EP 89100198	A	19890107	199213	
DE 58901001	G	19920430				199219	
US 5191969	A	19930309	US 89301540	A	19890124	199312	

Priority Applications (No Type Date): CH 88330 A 19880201
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 326808	A	G	4		
Designated States (Regional): AT BE DE ES FR GB GR IT LU NL SE					
EP 326808	B		5		
Designated States (Regional): AT BE DE ES FR GB GR IT LU NL SE					
US 5191969	A		6	H01H-009/26	

Abstract (Basic): EP 326808 A
The *plate"** (1) has a *through"**-*hole"** (2) having a cross-section corresp. to the switch (10) to be mounted. The latter can be inserted into the hole and secured against rotation. The distance of the switch can be varied within set limits.
The *plate"** has a U-shaped recess at one end and a projecting tongue at the other with flanks extending in *parallel"** w.r.t. a dia. line bisecting the recess. The recess and tongue enable two orientation *plates"** to be slid into each other in the manner of a *groove"** and spring coupling.
ADVANTAGE - Minimal distance between neighbouring switches freely selectable within certain limits.
3/4
Abstract (Equivalent): EP 326808 B
The *plate"** (1) has a *through"**-*hole"** (2) having a cross-section corresp. to the switch (10) to be mounted. The latter can be inserted into the hole and secured against rotation. The distance of the switch can be varied within set limits.

The *plate"** has a U-shaped recess at one end and a projecting tongue at the other with flanks extending in *parallel"** w.r.t. a dia. line bisecting the recess. The recess and tongue enable two orientation *plates"** to be slid into each other in the manner of a *groove"** and spring coupling.

ADVANTAGE - Minimal distance between neighbouring switches freely selectable within certain limits. (4pp Dwg.No.3/4

Abstract (Equivalent): US 5191969 A

The device for orienting switches and similar objects has at least one *plate"**-like member having an opening for reception of an object in it. A projection is provided at one side of and spaceda part from the opening, and a recess complementary to the projection is disposed at another side opposite one side and also spaced apart from the opening. A pair of *parallel"** surfaces flank the recess and a second pair of surfaces flank the projection, each surface of the first pair being aligned with a surface of the second pair. The member also has respective *thicknesses"** in the region of each pair of surfaces, with the first *thickness"** exceeding the second *thickness"**.

USE/ADVANTAGE - E.g. for control panel, switchboard panelboard, distribution board, actuator, circuit breaker, etc. Permits varying of mutual spacing of oriented objects and can support different types of objects/switches simultaneously. (Dwg.3/4)

28/3,AB/8 (Item 8 from file: 351)
DIALOG(R)File 351:Derwent WPI

007493503
WPI Acc No: 1988-127436/198819
XRPX Acc No: N88-096833

Drive belt for cone transmission - has metal blocks with cut-outs for link elements and sprung pivot axles

Patent Assignee: AISIN-WARNER LTD (AISW)
Inventor: MIYAISHI Y; SAKAKIBARA S
Number of Countries: 003 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3737292	A	19880505	DE 3737292	A	19871104	198819	B
GB 2197421	A	19880518	GB 8725799	A	19871104	198820	
US 4822323	A	19890418	US 87113775	A	19871028	198918	
GB 2197421	B	19900530				199022	
DE 3737292	C2	19971016	DE 3737292	A	19871104	199745	

Priority Applications (No Type Date): JP 86260706 A 19861104
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3737292	A		10		
US 4822323	A		11		
DE 3737292	C2		9	F16H-009/24	

Abstract (Basic): DE 3737292 A

The drive belt is made up from a number of profiled metal blocks each with upper and lower profiles linked by webs to form an open shape. The linking elements are interleaved and threaded on transverse axle pins (4) held in the blocks by clip springs (20,19) with the ends of the clips shaped to grip over the ends of the pins.

The sides of the upper and lower sections are angled (9,10) to form

the thrust surfaces of the belt onto the conical surfaces of the adjustable cones.

USE/ADVANTAGE - Variable transmission. Strong construction, even wear on link elements.

3/5

Abstract (Equivalent): GB 2197421 B

An endless transmission belt for transmitting torque between a pair of pulleys, each pulley having opposed coaxial, frusto-conical contact surfaces, comprising: a plurality of pairs of metallic blocks each block consisting of a trapezium-shaped *plate"** having contact surfaces on the non-*parallel"** side faces thereof, at least one *through"** *hole"** passing through the *thickness"** of the *plate"** , recesses in the said side faces in alignment with the *through"** *hole"**, pillar-like portions between the *through"** *hole"** and recesses and a *groove"** running in the direction of the width of the block, in certain surfaces of the pillar-like portions which surfaces are opposed to corresponding surfaces in an adjacent block; an endless belt comprising a *parallel"** arrangement of at least three strands of thin link *plates"**, each of the said strands comprising a plurality of sets of link *plates"** each link *plate"** having the same length, each set comprising a plurality of link *plates"** arranged side by side with their major faces opposed to each other, the link *plates"** of each set being interleaved with those of the longitudinally adjacent sets in the strand and pivotally interconnected by means of articulating pins which pass through the link *plates"**, the articulating pins being common to the said at least three strands and the strands being spaced across the articulating pins; and retaining members for restraining axial displacement of the said pins which engage the ends of the pins on each side of the endless belt; each of the said strands of link *plates"** having a width conforming to the respective width of the corresponding recesses and *through"** *hole"** or *through"** *holes"** of the said metallic blocks, and passing through the corresponding recesses and *through"** *hole"** or *through"** *holes"** of the said blocks, which recesses and *through"** *holes"** or *through"** *holes"** pass through the *thickness"** of the blocks, the said pairs of metallic blocks being retained between adjacent articulating pins and all adjacent blocks being in contact wit

Abstract (Equivalent): US 4822323 A

Pairs of metallic blocks have at least one *through"** *hole"** in alignment with recesses formed in opposite inclined side edges of the block. An endless chain belt holds the metallic blocks. The endless chain belt is constructed by at least three strands of link *plates"** which are pivotally interconnected with predetermined intervals between with common articulating pins. Each strand of link *plates"** is inserted into each of *through"** *holes"** or holes and recesses and a pair of metallic blocks is retained pivotably between a pair of adjacent pins. USE - Endless transmission belt for transmitting torque between a pair of pulleys e.g. in a continuously variable transmission.

(11pp

28/3,AB/9 (Item 9 from file: 351)
DIALOG(R)File 351:Derwent WPI

007136267

WPI Acc No: 1987-136264/198720
XRPX Acc No: N87-102073
Modulating *plate"** for silo, tank, etc. - NoAbstract
Patent Assignee: BEGO N A (BEGO-I)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
BR 8603724	A	19870310	BR 863724	A	19860724	198720	B

Priority Applications (No Type Date): AR 301098 A 19850725

Abstract (Basic): BR 8603724 A
The module, of flat or curved *plate"** form, has a continuous rib along two adjacent sides, commencing *parallel"** to the main surface of the *plate"** and ending in a recess, olefining a step with the free edge of the *plate"** and having a depth equal to half the *thickness"**. The other sides of the *plate"** have a similar rib from the same start, but with the step directed towards the opposite surface. Hence each pair of ribs facing the same main surface is perpendicular to the other and intersect at their free ends with the other pair projecting from the other two sides of the *plate"**. One pair of ribs has a number of *through"** *holes"**, while the other pair has the same number of blind holes, each housing a fixing element for a corresp. joining element pasing through the open holes, so that the open and blind holes are exactly aligned.
Opt. one rib of a pair may have at least one projecting card *parallel"** to the *plate"** edge, while the other rib has a similar *groove"**.

28/3,AB/10 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08462652 Supplier Number: 72121915
Primary Machinery.(Brief Article)
Modern Plastics, pD-1
Feb 15, 2001
Language: English Record Type: Fulltext
Article Type: Brief Article
Document Type: Magazine/Journal; Trade
Word Count: 31384

28/3,AB/11 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08396993 Supplier Number: 71317989
Multispindle spotlight.
American Machinist, v145, n2, p110
Feb, 2001
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 6186

28/3,AB/12 (Item 3 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

08181019 Supplier Number: 68649221
New equipment.
American Machinist, v144, n12, p114
Dec, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 3080

28/3,AB/13 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

07358369 Supplier Number: 59036171
Product Times.
Holland, Colin
Electronics Times, p39
March 6, 1997
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 7883

28/3,AB/14 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

07358159 Supplier Number: 59035819
1997 New Product Supplement.
Appliance, v54, n12, p93
Dec, 1997
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 17159

28/3,AB/15 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

06874568
FUEL CELL SYSTEM

PUB. NO.: 2001-102073 [JP 2001102073 A]
PUBLISHED: April 13, 2001 (20010413)
INVENTOR(s): NAKANISHI HARUMICHI
APPLICANT(s): DAIHATSU MOTOR CO LTD
APPL. NO.: 11-280106 [JP 99280106]
FILED: September 30, 1999 (19990930)

ABSTRACT

PROBLEM TO BE SOLVED: To efficiently use energy and sufficiently wet a solid polymer membrane in a system including a solid polymer type of fuel cell.

SOLUTION: In a fuel cell system comprising a fuel cell 4, a hydrogen gas feeding source, an oxygen gas feeding source, and a water feeding source 5, wherein the fuel cell 4 where a negative pole portion, a solid polymer film as an electrode portion, and a positive pole portion are arranged between a pair of *plates"** formed with *groove"** portions for feeding the hydrogen gas or *groove"** portions for feeding the oxygen gas is consisting of one unit or plural unit cells. Preferably forming a hollow type of space opened in one surface of the *plates"** through a *through"** *hole"** expanding to a *thickness"** direction in the *plates"** located at the outermost portion of the fuel cell, at the same time continuously passing the space into the water feeding source 5. Further, in the bottom portion of the *groove"** portion for feeding the hydrogen gas or the *groove"** portions for feeding the oxygen gas of the *plates"**, the *through"**-*hole"** is formed in *parallel"** with the expanding direction of the *groove"** portions.

28/3,AB/16 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO

06816226
SURFACE LIGHT SOURCE UNIT

PUB. NO.: 2001-043719 [JP 2001043719 A]
PUBLISHED: February 16, 2001 (20010216)
INVENTOR(s): SHIMURA TAKASHI
AMANO AKIRA
APPLICANT(s): CITIZEN ELECTRONICS CO LTD
APPL. NO.: 11-214357 [JP 99214357]
FILED: July 28, 1999 (19990728)

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a surface light source of an edge light system which is uniform in luminance.

SOLUTION: A light guide *plate"** 11, which is a planar member made of a translucent member and forms irregular reflection parts 15 constituted of a plurality of semispherical recesses on a lower surface is constituted of a light emitting part 12 in which an upper surface 12a, is provided as a light emitting surface and a planar shape is a substantially right-angle quadrilateral and a plurality of light source parts 13 extending a virtual side surface (m) on an LED 20 side of the light emitting part 12 to the LED 20 side. The LED 20 is disposed corresponding to each light source part 13. Within the light source part 13, a reflection and refraction part 16 constituted of a *through"**-*hole"** or a non-*through"**-*hole"** is provided so as to be opposed to the LED 20. An LED 20 side boundary surface 16b of the reflection refraction part 16 is a reflection refraction surface, in which the *thickness"** direction cross section of the light guide *plate"** 11 is vertical and plane direction cross section is inclined to the LED 20. On both side surfaces 13d on the LED 20 side of the light source part 13, the irregular reflection parts 15 constituted of a plurality of *grooves"** having substantially circular arc shapes in cross section substantially *parallel"** to the *thickness"** direction of the light guide *plate"** 11 are provided.

28/3,AB/17 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

06816225
SURFACE LIGHT SOURCE UNIT AND LIQUID CRYSTAL DISPLAY DEVICE USING THE SAME

PUB. NO.: 2001-043718 [JP 2001043718 A]
PUBLISHED: February 16, 2001 (20010216)
INVENTOR(s): SHIMURA TAKASHI
YAMADA TATSURO
APPLICANT(s): CITIZEN ELECTRONICS CO LTD
APPL. NO.: 11-214356 [JP 99214356]
FILED: July 28, 1999 (19990728)

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a surface light source of an edge light system which is uniform in luminance by effectively making effective use of light of an LED light source.

SOLUTION: A light guide *plate"** 11, which is planar member made of a translucent member and forms irregular reflection parts 15 on a lower surface, is constituted of a light emitting part 12 in which an upper surface 12a is provided as a light emitting surface, and a planar shape is a substantially right-angled quadrilateral and a light source part 13, extending from a light emitting surface 12a to an LED 20 side on one side surface of the LED 20 side. Within the light source part 13, a reflection and refracting part constituted of a *through"** *hole"** or a non-*through"**-*hole"** having a boundary surface 16b in which *thickness"** direction cross section of the light guide *plate"** 11 is vertical and plane direction cross section is inclined to the LED 20 is provided so as to be opposed to the LED 20. On both side surfaces 13d on the LED 20 side of the light source part 13, irregular reflection parts 15 constituted of a plurality of *grooves"** having substantially circular arc shapes in cross section substantially *parallel"** in the *thickness"** direction of the light guide *plate"** 11 are provided. On peripheral surfaces (13b, 13c, 13d, 12b, 12c, 12d), excepting at least light incoming surface 13f and a light emitting surface 13a of the light guide *plate"** 11, reflecting members are arranged adjacently.

28/3,AB/18 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

06816224
SURFACE LIGHT SOURCE UNIT AND LIQUID CRYSTAL DISPLAY DEVICE USING THE SAME

PUB. NO.: 2001-043717 [JP 2001043717 A]
PUBLISHED: February 16, 2001 (20010216)
INVENTOR(s): SHIMURA TAKASHI
APPLICANT(s): CITIZEN ELECTRONICS CO LTD
APPL. NO.: 11-214355 [JP 99214355]

FILED: July 28, 1999 (19990728)

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a surface light source of an edge light system which is uniform in luminance.

SOLUTION: A light guide *plate"** 11 which is planar member, made of a translucent member and forms irregular reflection pats 15 constituted of a plurality of semispherical recesses on a lower surface is constituted of a light emitting part 12 in which an upper surface 12a is provided as a light emitting surface and a planar shape is a substantially right-angled quadrilateral and a light source part 13 which extends a virtual side surface (m) on the LED 20 side of the light emitting part 12 to the LED 20 side and is larger in *thickness"** than that of the light emitting part 12 of the light guide *plate"** 11. Within the light source part 13, a reflection and refracting part 16 constituted of *through"**-*holes"** or non-*through"**-*holes"** is provided so as to be opposed to the LED 20. An LED 20 side boundary surface 16b of the reflection and refracting part 16 is a boundary surface 16b, in which *thickness"** direction cross section of the light guide *plate"** 11 is vertical and plane direction cross section is inclined to the LED 20. On both side surfaces 13d on the LED 20 side of the light source part 13, irregular reflection parts 15 constituted of a plurality of *grooves"** having substantially circular arc shapes in cross section substantially *parallel"** in the *thickness"** direction of the light guide *plate"** 11 are provided.

28/3,AB/19 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO

06816223
SURFACE LIGHT SOURCE UNIT

PUB. NO.: 2001-043716 [JP 2001043716 A]
PUBLISHED: February 16, 2001 (20010216)
INVENTOR(s): SHIMURA TAKASHI
APPLICANT(s): CITIZEN ELECTRONICS CO LTD
APPL. NO.: 11-214354 [JP 99214354]
FILED: July 28, 1999 (19990728)

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a surface light source of an edge light system which is uniform in luminance.

SOLUTION: A light guide *plate"** 11, which is a planar member made of a translucent member and densely forms irregular reflection parts at positions farther from a light source on a lower surface, is constituted of a light emitting part 12 in which an upper surface 12a is provided as a light emitting surface, and a plane shape is a substantially right-angled quadrilateral and a light source part 13 which is continuous to a virtual side surface (m) on an LED 20 side and extends from the light emitting surface part 12 to the LED 20 side. Within the light source part 13, a reflection refracting part 16 constituted of *through"**-*holes"** or non-*through"**-*holes"** having a reflection refracting surface 16b, in which *thickness"** direction cross section of the light guide *plate"** 11 is

vertical and plane direction cross section is inclined with respect to the LED 20 is provided so as to be opposed to the LED 20. On both side surfaces 13d on the LED 20 side of the light source part 13, irregular reflection parts 15, constituted of a plurality of *grooves"** of substantially circular, arc cross-sectional in shapes substantially *parallel"** in the *thickness"** direction of the light guide *plate"** 11 are provided. The irregular reflection parts 15 are provided so that the area ratio is larger, the farther away the irregular reflection parts are from the light source.

28/3,AB/20 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO

06805020
ATTACHING STRUCTURE OF TILE AND ITS ATTACHING METHOD

PUB. NO.: 2001-032504 [JP 2001032504 A]
PUBLISHED: February 06, 2001 (20010206)
INVENTOR(s): TAKATSU AKIO
BABA KATSUHIKO
HASEGAWA KENICHI
APPLICANT(s): HASEGAWA SEISAKUSHO KK
APPL. NO.: 11-210227 [JP 99210227]
FILED: July 26, 1999 (19990726)

ABSTRACT

PROBLEM TO BE SOLVED: To quickly and surely attach a tile by forming a locking part and a *through"** *hole"** in a base sheet, locking the tile on the locking part, and filling a part between the rear face of the tile facing the *through"** *hole"** and the surface of a substrate side with an adhesive.

SOLUTION: A plurality of locking parts 4 are formed on the surface of a base sheet 2 in *parallel"** at regular intervals in the width direction, and a plurality of *through"** *holes"** 5 are formed between the locking parts 4, 4 at regular intervals. The base *plate"** 2 is fixed on the surface of a substrate 1, an adhesive 7 is applied at substantially the same height *thickness"** as the height of the locking part 4, and the locking *groove"** 8 of the rear face of a tile 6 is pressed in the rear face of the tile 6. The adhesive 7 is spread in a gap part between the locking *groove"** 8 and the locking part 4 and between the *through"** *hole"** 5 and the center locking *groove"** 8, and the thin layer adhesive 7 is interposed between the inner face of each locking *groove"** 8 and the surface of the locking part 4, and between the upper and lower ends of the rear face of the tile 6 and the base sheet 2. Then, a part of the adhesive 7 is moved upward and downward and sideward of the tile 6, and a joint space between the tiles 6, 6 is filled. Thus, the joint space is left on the locking part 4, had better is hooked, and working is simply and quickly is performed.

28/3,AB/21 (Item 7 from file: 347)

06530905
BIOSENSOR USED FOR LANCET INTEGRATED TYPE HUMOR MEASURING APPARATUS

PUB. NO.: 2000-116628 [JP 2000116628 A]
PUBLISHED: April 25, 2000 (20000425)
INVENTOR(s): NODA NORIMASA
MATSUOKA SHIRO
NODA YUICHIRO
KATSUKI KOJI
HAMAMOTO KATSUMI
APPLICANT(s): KDK CORP
APPL. NO.: 10-314029 [JP 98314029]
FILED: October 15, 1998 (19981015)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a biosensor to let a running humor running accurately penetrate directly into a *through"** *hole"**.

SOLUTION: In this biosensor, a *parallel"** surface facing a surface on which an electrode on a planar longitudinal rectangular base *plate"** 36A comprising an insulation sheet made of a resin with the *thickness"** of 0.2 mm, namely, a skin contact surface part is previously subjected to a hydrophobic treatment, a water repelling treatment or the like and a *through"** *hole"** 361a is formed. Then, a working pole 36c and a counter pole 36d are formed and a resist layer 36j leaving 36f and 36h. Then, a spacer *plate"** 36B is arranged to form a recessed *groove"**. Then, a cover *plate"** 36C having a *through"** *hole"** 362b is laminated to make a sensor. Thus, a humor running after a puncturing through the *through"** *hole"** can accurately penetrate directly into the *through"** *hole"** without getting into a clearance between the sensor and the skin.

28/3,AB/22 (Item 8 from file: 347)

06478902
FLOOR HEAT INSULATING STRUCTURE, HEAT INSULATING MATERIAL AND BUILDING UNIT

PUB. NO.: 2000-064479 [JP 2000064479 A]
PUBLISHED: February 29, 2000 (20000229)
INVENTOR(s): ETSUNO MASAYUKI
APPLICANT(s): SEKISUI CHEM CO LTD
APPL. NO.: 10-232908 [JP 98232908]
FILED: August 19, 1998 (19980819)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a floor heat insulating structure in which a *thickness"** of a heat insulating material is larger than a height of a floor common joist, the heat insulating material used in this floor heat insulating structure, and a building unit having the floor heat insulating structure.

SOLUTION: This is a floor heat insulating structure in which a plurality of beams 2 are arranged in *parallel"**, a plurality of common joists 3 are provided in *parallel"** on them by crossing, a floor *plate"** 6 is provided on the common joist 3, and a heat insulating material 7 is provided below the floor *plate"** 6. The heat insulating material 7 is integrally provided in such a way that a plurality of heat insulating parts between common joists cross on a plurality of heat insulating parts between beams, a beam insertion *groove"** is provided between the heat insulating parts between beams on a rear surface, a common joist insertion *groove"** is provided between the heat insulating parts between common joists on a surface, and a *through"** *hole"** part is provided in such a manner that the beam insertion *groove"** and the common joist insertion *groove"** cross.

28/3,AB/23 (Item 9 from file: 347)
DIALOG(R)File 347:JAPIO

06331880
CABLE BUSHING

PUB. NO.: 11-273481 [JP 11273481 A]
PUBLISHED: October 08, 1999 (19991008)
INVENTOR(s): OKOCHI MINORU
APPLICANT(s): NEC ENG LTD
APPL. NO.: 10-070337 [JP 9870337]
FILED: March 19, 1998 (19980319)

ABSTRACT

PROBLEM TO BE SOLVED: To establish a certain waterproof structure, facilitate cable insertion, and secure the freedom of bending a cable.

SOLUTION: A cable 3 threaded through a *through"** *hole"** provided in an outer *plate"** 2 is engaged with the outer *plate"** 2 by a cylindrical cable bushing 1, and the internal wall surface of its trunk part 13 is furnished with a plurality of inner pleats 14 as ring-shaped projections in *parallel"** arrangement to ensure certain waterproofing, and the inner pleats 14 are furnished with forefront pleats 15 equipped wi a height and *thickness"** corresponding to the difference in diameter between cables 3 penetrating and having a plurality of fine ring- shaped projections in the forefront part so as to facilitate insertion of the cable, while the external wall surface of the trunk part 13 is equipped with a plurality of outer ring-shaped *grooves"** 16 in *parallel"** arrangement, and the whole trunk part 13 is formed in pleats so as to secure the freedom of bending the cable.

28/3,AB/24 (Item 10 from file: 347)
DIALOG(R)File 347:JAPIO

05872267
POOL SEEDLING RAISING BOX

PUB. NO.: 10-155367 [JP 10155367 A]
PUBLISHED: June 16, 1998 (19980616)
INVENTOR(s): TANIGUCHI MITSUNORI
FUJII KAORU
APPLICANT(s): TANAKA SANGYO KK [464212] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-338860 [JP 96338860]
FILED: December 03, 1996 (19961203)

ABSTRACT

PROBLEM TO BE SOLVED: To dissolve the problems that the flow velocity of incoming and outgoing water at a *through"**-*hole"** part becomes large at the time of exchanging pool water or the like, the aggregate structure of ridging is destroyed, it obstructs the growth of healthy seedlings by the reduction of an air layer, the roots of semi-grown and grown seedlings are projected from *through"**-*holes"**, the inconvenience of the generation of root cutting or the like is observed especially at the time of mechanical transplanting by a rice transplanter or the like and it is impossible to *parallelize"** many seedling raising boxes in a close contact state before sowing since many *through"** *holes"** whose diameter is 3-5mm are passed trough on a bottom *plate"** for the seedling raising box in a conventional pool seedling raising method.

SOLUTION: In this seedling raising box 1 provided with a prescribed external dimension, many thin holes 1d of 1-1.5mm.phi. are passed through on the bottom *plate"** surface and a recessed *groove"** capable of fitting the flange ring of a sowing machine or the like is notched excluding the *thickness"** of a long side wall 1b on both sides of the opposing short side wall 1a of the respective seedling raising boxes 1.

28/3,AB/25 (Item 11 from file: 347)
DIALOG(R)File 347:JAPIO

05651443
WAFER CASE

PUB. NO.: 09-266243 [JP 9266243 A]
PUBLISHED: October 07, 1997 (19971007)
INVENTOR(s): KAZAMA HITOSHI
APPLICANT(s): TOYO JUSHI KK [000000] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-097783 [JP 9697783]
FILED: March 27, 1996 (19960327)

ABSTRACT

PROBLEM TO BE SOLVED: To couple and release a wafer case only by twisting the case by forming protrusions on the side wall of an inner case, cutting *through"**-*holes"** and notches into an outer case and key ring to insert the protrusions and cutting *grooves"** into the protrusions corresponding to the notches of the key ring.

SOLUTION: An inner case 1 has adequate number of protrusions 5 at the outer top end 3 and the protrusions have cut *grooves"** 6 at higher structure by the *thickness"** of an outer case 7; the being *parallel"** to the top end edge 31. The outer case 7 has *grooves"** 10 at vertical parts 9 thereof

and *through"**-*holes"** 14 corresponding to the protrusions 5 along an extension edge 11 of a top *plate"** 8. A key ring 15 has notches 18 corresponding to the *through"**-*holes"** 14 of the outer case 7. The key ring 15 adjacent to the notches 18 expands the *grooves"** 6 of the protrusions 5 and enters into the *grooves"** 6.

28/3,AB/26 (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO

04445576
MAGNETO-OPTICAL DISK DEVICE

PUB. NO.: 06-089476 [JP 6089476 A]
PUBLISHED: March 29, 1994 (19940329)
INVENTOR(s): KUMAI KATSUNORI
APPLICANT(s): OLYMPUS OPTICAL CO LTD [000037] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 04-238442 [JP 92238442]
FILED: September 07, 1992 (19920907)
JOURNAL: Section: P, Section No. 1764, Vol. 18, No. 353, Pg. 82, July 04, 1994 (19940704)

ABSTRACT

PURPOSE: To reduce the *thickness"** of a bias coil while keeping the reliability of data and also the stability of operation.

CONSTITUTION: A *plate"** 36 is provided on a base 2 to be movable along X-axis. 1st and 2nd *grooves"** 48 and 50 inclined at the same angle to the base 2 with each other are formed on side walls 46 of the *plate"** 36. A cartridge holder 52 is formed with 1st and 2nd pins 58 and 60. A coil holder 70 is provided with a *through"** *hole"** 76 and a 3rd pin 78. The 1st pin is fitted via the *through"** *hole"** 76 into the 1st *groove"** 48, while the 3rd pin 78 is fitted into the 2nd *groove"** 50. The 2nd pin 60 is disposed in a *groove"** 62 of the base 2. By the above constitution, when the *plate"** 36 is moved, the coil holder 70 is moved vertically while keeping its *parallel"** state to the base 2, and the cartridge holder 52 is turned around the 2nd pin 60 as the center.

28/3,AB/27 (Item 13 from file: 347)
DIALOG(R)File 347:JAPIO

04006557
PREFABRICATED STONE VENEER WALL AND METHOD FOR ATTACHING STONE BOARD

PUB. NO.: 04-371657 [JP 4371657 A]
PUBLISHED: December 24, 1992 (19921224)
INVENTOR(s): HASHIDA TAKAAKI
APPLICANT(s): HASHIDA TAKAAKI [000000] (An Individual), JP (Japan)
APPL. NO.: 03-242925 [JP 91242925]
FILED: June 18, 1991 (19910618)
JOURNAL: Section: M, Section No. 1412, Vol. 17, No. 252, Pg. 165, May 19, 1993 (19930519)

ABSTRACT

PURPOSE: To perform an attachment work of stone boards of a wall with ease by fixing stone boards to a structural body and using a fitting for attaching stone boards which can connect stone boards to each other.

CONSTITUTION: In a stone veneer wall 30 wherein natural or artificial stone boards 31 having square edge surfaces are *parallely"** placed and fixed on a structural body 11 through a fitting 20 for attaching stone board in the vertical and left-right directions, the fitting 20 has a configuration of a cube or rectangular having a height corresponding to the width of a joint 32 and a width narrower than two thrids of the *thickness"** of the stone board and comprises a spacer 22 having a *through"** *hole"** bored in the *thickness"** direction, a *plate"**-like piece 23 having a narrow width and a *through"** *hole"** provided in the middle thereof, and a screw 24 for rotatably supporting the piece 23 with respect to the spacer. The stone board has a semicircular *groove"** 33 on its edge surface for engagement with the piece 23 which rotates in the vertical and/or horizontal direction.

28/3,AB/28 (Item 14 from file: 347)
DIALOG(R)File 347:JAPIO

03757996
DISPLAY BLOCK

PUB. NO.: 04-123096 [JP 4123096 A]
PUBLISHED: April 23, 1992 (19920423)
INVENTOR(s): IWATA NORIAKI
SHIBATA SHOJI
APPLICANT(s): NGK INSULATORS LTD [000406] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 02-245078 [JP 90245078]
FILED: September 14, 1990 (19900914)
JOURNAL: Section: P, Section No. 1403, Vol. 16, No. 382, Pg. 75, August 14, 1992 (19920814)

ABSTRACT

PURPOSE: To improve the transmission function of a display in a specific place by enabling the display on a display body to be recognized from a constant area *through"** *holes"** of a honeycomb structure.

CONSTITUTION: The honeycomb structure 4 has many partition walls formed in the *thickness"** direction of a support *plate"** 3 and many *parallel"** *through"** *holes"** are formed of the partition walls. Further, an annular illumination lamp 5 is fitted to a support *plate"** *groove"** 3b and the display board 6 is further fitted on the rear side. Therefore, the display on the display board 6 can be recognized only from the specific area with light transmitted in one direction from the transparent surface of the honeycomb structure through the *through"** *holes"**. Consequently, when a person enters the area from outside, characters, symbols, etc., on the display body which can not be recognized so far can be seen with the eyes and the display recognizing function is increased at the point of time.

28/3,AB/29 (Item 15 from file: 347)
DIALOG(R)File 347:JAPIO

03591848
SHOULDER LAYING DEVICE

PUB. NO.: 03-254748 [JP 3254748 A]
PUBLISHED: November 13, 1991 (19911113)
INVENTOR(s): HAMA KIYOO
APPLICANT(s): HAMA KIYOO [000000] (An Individual), JP (Japan)
APPL. NO.: 02-052515 [JP 9052515]
FILED: March 02, 1990 (19900302)
JOURNAL: Section: C, Section No. 909, Vol. 16, No. 54, Pg. 59, February 12, 1992 (19920212)

ABSTRACT

PURPOSE: To secure the effective finger pressure therapy at a necessary time by the title shoulder laying device which has the simple structure and is advantageous in transport by forming a guide hole and an accommodation *groove"** for tightening-fixing a pressing member for finger pressure therapy on the reverse surface of a supporting *plate"** which is formed in curved form and installing the pressing member in shiftable manner along the tapped hole on the obverse surface side of the supporting *plate"**.

CONSTITUTION: A wooden supporting member 1 is formed long, and curved in the longitudinal direction, and a circular *through"** *hole"** 2 is formed in the upper part. Two accommodation *grooves"** 3 are formed in *parallel"** to the longitudinal direction, keeping the interval larger than the *thickness"** of a shoulder bone, on the reverse surface of the supporting *plate"** 1. A guide hole 4 which is narrower than the width of the accommodation *groove"** 3 is formed over the nearly whole length of the bottom surface of the accommodation *groove"** 3. Two pressing members 5 for finger pressure therapy are installed on the surface of the supporting *plate"** 1, and a tapped hole 6 is formed on the reverse surface side, and the tightening fixation at a prescribed position is performed by a screw 7 screwed into the tapped hole 6, penetrating through the guide hole 4 from the accommodation *groove"** 3 side. As for the head part 7a of the screw 7, the head part 7a is sunk into the accommodation *groove"** 3, in the state where a pressing member 5 is tightening-fixed on the supporting *plate"** 1.

28/3,AB/30 (Item 16 from file: 347)
DIALOG(R)File 347:JAPIO

03523743
PULLEY DRIVING MEMBER AND MOLDING METHOD THEREOF FOR BELT TYPE CONTINUOUSLY VARIABLE TRANSMISSION

PUB. NO.: 03-186643 [JP 3186643 A]
PUBLISHED: August 14, 1991 (19910814)
INVENTOR(s): MAEDA AKIHIRO
APPLICANT(s): MITSUBISHI MOTORS CORP [351404] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-324258 [JP 89324258]
FILED: December 14, 1989 (19891214)
JOURNAL: Section: M, Section No. 1177, Vol. 15, No. 441, Pg. 152, November 11, 1991 (19911111)

ABSTRACT

PURPOSE: To obtain a pulley driving member in a good yield rate with no accurate work required by drawing-molding a *plate"** material, folding the fitting end part of a seal member in an axial direction to form a flange part and press-crushing it to form a large *thickness"** part and cutting a seal fitting *groove"** part in a surface in *parallel"** to the shaft of the large *thickness"** part.

CONSTITUTION: A boss part 5a, sloped part 5d, wall part 5e and a *through"** *hole"** 5f are formed by drawing-molding a *plate"** material of predetermined *thickness"**, and a peripheral end part 5b is formed by overhanging the sloped part 5d from its end part in the radial direction. Next a flange part 5g is formed by folding the peripheral end part 5b in a direction *parallel"** to a shaft 2. In this folding work, the flange part 5g is folded and formed by using a jig 15 of shape provided with a chamfering part 5h inside the flange part 5g. Next the flange part 5g, after it is formed, is press-crushed by forging in the direction of the shaft 2 to form a large *thickness"** part 5i. A *grooved"** part 5c is formed by cutting and finishing a surface *parallel"** to the shaft 2 of the *thickness"** part 5i. In this way, a seal member 14, provided with predetermined pressureproof performance, can be used for the *grooved"** part 5c, and the peripheral edge part of a cylinder 5 can be surely closely sealed.

28/3,AB/31 (Item 17 from file: 347)
DIALOG(R)File 347:JAPIO

03494702

IMAGE TRANSMISSION ELEMENT AND PRODUCTION OF LIGHT SHIELDING *PLATE"** USED FOR THIS ELEMENT

PUB. NO.: 03-157602 [JP 3157602 A]
PUBLISHED: July 05, 1991 (19910705)
INVENTOR(s): HAMANAKA KENJIRO
SOYA KENZOU
KISHIMOTO TAKASHI
APPLICANT(s): NIPPON SHEET GLASS CO LTD [000400] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-297958 [JP 89297958]
FILED: November 16, 1989 (19891116)
JOURNAL: Section: P, Section No. 1260, Vol. 15, No. 395, Pg. 33, October 07, 1991 (19911007)

ABSTRACT

PURPOSE: To obtain sharp images having a high resolution by bringing a pair of members formed with many *grooves"** constituting the longitudinally split half side parts of *through"**-*holes"** in *parallel"** into tight contact with each other by mating the *grooves"** with each other, thereby constituting a light shielding spacer *plate"**.

CONSTITUTION: A lens array *plate"** 101 is one-dimensionally arranged and formed with many microlenses 21, each consisting of nearly a hemispherical region having the refractive index larger than the refractive index of the periphery, at specified intervals, within the wall *thickness"** on one surface of a transparent substrate of glass, etc., having a flat surface such as glass. The light shielding spacer *plate"** 102 is made of a

the rear of the planar base *plate"** 2 are eliminated and furthermore both the planar base *plate"** 2 and the sticking-preventive *plate"** 3 can be easily attached and detached to/from the pallet 1 from the unidirection.

28/3,AB/33 (Item 19 from file: 347)
DIALOG(R)File 347:JAPIO

00859338
PARTS FEEDER

PUB. NO.: 57-009638 [JP 57009638 A]
PUBLISHED: January 19, 1982 (19820119)
INVENTOR(s): NAGASHIMA KAZUO
APPLICANT(s): TOSHIBA MACH CO LTD [000345] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 55-083741 [JP 8083741]
FILED: June 20, 1980 (19800620)
JOURNAL: Section: M, Section No. 125, Vol. 06, No. 69, Pg. 167, April 30, 1982 (19820430)

ABSTRACT

PURPOSE: To efficiently send out stored articles one by one, by providing a fixed *plate"** and a rotary *plate"** almost in *parallel"** with each other and fitting both the *plates"** with guides through which almost a half of the *thickness"** of the fed article can pass and by providing a *through"** *hole"** in one of the *plates"** and by feeding the articles while rotating the rotary *plate"**.

CONSTITUTION: A fixed *plate"** 19 is provided on an upside *plate"** 1a. A rotary *plate"** 23 is mounted on a rotary shaft 15. The rotary *plate"** 23 is provided with a *through"** *hole"** 25 through which an article 26 can pass. The fixed *plate"** 19 is provided with a fixed guide 28, which falls for almost the lower half of the *thickness"** of the article 26 when the *through"** *hole"** 25 has come to a position A. A *groove"**-shaped movable guide 30, which extends outwards from the lower end of the *through"** *hole"** 25, is provided on the bottom of the rotary *plate"** 23. The stacked articles 26 go down through the hole 25 with the rotation of the rotary *plate"** 23 and are sequentially pushed out into a chute 29 by the action of the fixed guide 28 and the movable guide 30. According to this constitution, the articles 26 can be surely and quickly sent out one by one.

Set	Items	Description
S29	8308	AU=(NELSON, G? OR NELSON G?)
S30	292	AU=(MACOMBER, R? OR MACOMBER R?)
S31	574	AU=(CLARKIN, J? OR CLARKIN J?)
S32	1	S31 AND S29 AND S30
S33	22	S31 AND (S29 OR S30)
S34	1	S29 AND S30
S35	9151	S29 OR S30 OR S31
S36	1	S35 AND (S1 OR S21)
S37	21	(S32 OR S33 OR S34 OR S36) NOT (S16 OR S19 OR S25)
S38	6	RD (unique items)

- Author(s)

>>>No matching display code(s) found in file(s): 65, 342

38/3,AB/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

7240232 INSPEC Abstract Number: A2002-11-4281-004
Title: Low-OH optical fiber with high transparency and radiation resistance over wide spectral range
Author(s): Khalilov, V.Kh.; *Nelson, G.W."**; *Clarkin, J.P."**
Author Affiliation: Quartz Glass Inst., St. Petersburg, Russia
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.4253 p.68-75
Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 2001 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(2001)4253L.68:OFWH;1-C
Material Identity Number: C574-2001-220
U.S. Copyright Clearance Center Code: 0277-786X/01/$15.00
Conference Title: Optical Fibers and Sensors for Medical Applications
Conference Sponsor: SPIE
Conference Date: 20-21 Jan. 2001 Conference Location: San Jose, CA, USA
Language: English
Abstract: There are two kinds of 'step-index' optical fibers with cores made of pure silica glass-high-OH and low-OH content. High-OH fibers are notable for transparency in the UV region of the spectrum and exhibit high radiation resistance while low-OH fibers are applied in IR applications. Decreasing the Cl/sub 2/-content in low-OH fibers diminishes the losses in the UV region, which expands the applications for low OH fibers to approximately 300 nm. But the task of fiber production with low OH-content along with transparency in the UV region to 200 nm with high radiation resistance requires a detailed study of the mechanisms of intrinsic and impurity defect formation.
Subfile: A

38/3,AB/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

7240229 INSPEC Abstract Number: A2002-11-4281-002
Title: UV fibers for applications below 200 nm
Author(s): Klein, K.; Arndt, R.; Hillrichs, G.; Ruetting, M.; Veidemanis, M.; Dreiskemper, R.; *Clarkin, J.P."**; *Nelson, G.W."**
Author Affiliation: Fachhochschule/University of Appl. Sci. Giessen-Friedberg, Friedberg, Germany
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.4253 p.42-9
Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 2001 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(2001)4253L.42:FAB;1-Q
Material Identity Number: C574-2001-220
U.S. Copyright Clearance Center Code: 0277-786X/01/$15.00
Conference Title: Optical Fibers and Sensors for Medical Applications
Conference Sponsor: SPIE
Conference Date: 20-21 Jan. 2001 Conference Location: San Jose, CA, USA

Language: English
Abstract: New fiber-optic applications have been demonstrated within the last years, mainly due to the unexpected progress in manufacturing of polarization-reduced fibers. In the meantime, analytical systems including UV-fibers and spectrometers are in operation including the wavelength region from 200 to 250 nm. Due to the progress in fiber-performance there is a stronger demand for UV-fiber which are significantly transparent below 200 nm. The current results on linear and nonlinear attenuation in silica fibers are summarized. For the linear attenuation, we used spectrometer with extended wavelength region down to 160 nm; in addition, the UV-light absorption including ozone generation has to be taken into account. With pulsed high-power ArF-laser (193 nm wavelength), the two-photon-absorption has been determined in more detail. For the first time, using hydrogen-loaded fibers, the nonlinear absorption coefficient has been measured without any influence by probe pulses. A mini D2-lamp-fiber-system is introduced for mobile applications below 200 nm; different fiber lengths show the limitations with increasing fiber lengths.
Subfile: A

38/3,AB/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

6764497 INSPEC Abstract Number: A2001-01-4281-001, B2001-01-4125-002
Title: Fiber-optic systems in the UV-region
Author(s): Huebner, M.; Meyer, H.; Klein, K.F.; Hillrichs, G.; Ruetting, M.; Veidemanis, M.; Spangenberg, B.; *Clarkin, J."**; *Nelson, G."**
Author Affiliation: Fachhochschule, Univ. of Appl. Sci. Giessen-Friedberg, Friedberg, Germany
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3911 p.303-12
Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 2000 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(2000)3911L.303:FOSR;1-K
Material Identity Number: C574-2000-141
U.S. Copyright Clearance Center Code: 0277-786X/2000/$15.00
Conference Title: Biomedical Diagnostic, Guidance, and Surgical-Assist Systems II
Conference Sponsor: SPIE; Int. Biomed. Opt. Soc
Conference Date: 25-26 Jan. 2000 Conference Location: San Jose, CA, USA
Language: English
Abstract: Mainly due to the unexpected progress in manufacturing of solarization-reduced all-silica fibers, new fiber-optic applications in the UV-region are feasible. However, the other components like the UV-sources and the detector-systems have to be improved, too. Especially, the miniaturization is very important fitting to the small-sized fiber-optic assemblies leading to compact and mobile UV-analytical systems. Based on independent improvements in the preform and fiber processing, UV-improved fibers with different properties have been developed. The best UV-fiber for the proposed applications is selectable by its short and long-term spectral behavior, especially in the region from 190 to 350 nm. The spectrum of the UV-source and the power density in the fiber have an influence on the nonlinear transmission and the damaging level; however, hydrogen can reduce

the UV-defect concentration. After determining the diffusion processes in the fiber, the UV-lifetime in commercially available all-silica fibers can be predicted. Newest results with light from deuterium-lamps, excimer-lasers and 5th harmonics of Nd:YAG laser is shown. Many activities are in the field of UV-sources. In addition to new UV-lasers like the Nd:YAG laser at 213 nm, a new low-power deuterium-lamp with smaller dimensions has been introduced last year. Properties of this lamp are discussed, taking into account some of the application requirements. Finally, some new applications with UV-fiber optics are shown; especially the TLC-method can be improved significantly, combining a 2-row fiber-array with a diode-array spectrometer optimized for fiber-optics.
Subfile: A B

38/3,AB/4 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

05295423
E.I. No: EIP99064695489
Title: Radiation-damage of all-silica fibers in the UV-region
Author: Gombert, J.; Ziegler, M.; Assmus, J.; Klein, K.F.; *Nelson, G."**; *Clarkin, J."**; Pross, H.; Kiefer, J.
Corporate Source: Univ of Applied Sciences Giessen-Friedberg, Friedberg, Ger
Conference Title: Proceedings of the 1999 Specialty Fiber Optics for Medical Applications
Conference Location: San Jose, CA, USA Conference Date: 19990124-19990125
E.I. Conference No.: 55116
Source: Proceedings of SPIE - The International Society for Optical Engineering v 3596 1999. p 124-132
Publication Year: 1999
CODEN: PSISDG ISSN: 0277-786X
Language: English
Abstract: Since several years, UVI-fibers having higher solarization-resistance are well known stimulating new fiber-optic applications in the UV-region below 250 nm. Besides the description of the improved transmission properties of UV-light from different UV-sources, the mechanisms of improvement have been discussed in detail. The UV-defects, mainly the E prime -center with the UV-absorption band around 215 nm, were passivated by using hydrogen-doping. Besides DUV-light, ionizing radiation like Gamma-radiation or X-rays can create similar defects in the UV-region. In the past, the radiation-damage in the UV-region was studied on silica bulk samples: again, E prime -centers were generated. Up to now, no UV-transmission through a 1 m long fiber during or after Gamma-radiation had been observed. However, the hydrogen in the UVI-fibers behaves the same for Gamma-irradiation, leading to a passivation of the radiation-induced defects and an improved transmission in the UV-C region below 250 nm. In this report, the influence of total dose and fiber diameter on the UV-damage after irradiation will be described and discussed. In addition, we will include annealing studies, with and without UV-light. Based on our results, the standard process of Gamma-sterilization with a total dose of approx. 2 Mrad can be used for UVI-fibers resulting in a good UV-transmission below 320 nm. Excimer-laser light at 308 nm (XeCl) and 248 nm (KrF) and deuterium-lamp light with the full spectrum starting at 200 nm can also be transmitted. (Author abstract) 34 Refs.

38/3,AB/5 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

14342828 PASCAL No.: 99-0551902
Improvements in UV-transmission of all-silica optical fibers with low OH-content
Specialty fiber optics for medical applications : San Jose CA, 24-25 January 1999
ASSMUS J; GOMBERT J; KLEIN K F; *CLARKIN J"**; *NELSON G"**
KATZIR Abraham, ed; HARRINGTON James A, ed
Fachhochschule Giessen-Friedberg, Wilhelm-Leuschner Strasse 13, 61169 Friedberg, Germany; Polymicro Technologies Inc., 18019 N. 25 th Avenue, Phoenix, AZ 85023-1200, United States
International Society for Optical Engineering, Bellingham WA, United States.; International Biomedical Optics Society, United States.
Specialty fiber optics for medical applications. Conference (San Jose CA USA) 1999-01-24
Journal: SPIE proceedings series, 1999, 3596 108-114
Language: English
All-silica fibers with an undoped core are preffered for UV-applications. There are three different types of synthetic silica for core material, differing mainly in OH-content. Up to now, only high-OH fibers seem to be suitable for UV-applications , because fibers with low-OH core material suffer from pre-existing UV-absorbing color centers due to fiber drawing and generation of these defects during UV-irradiation. With the same loading technique used for commercially available high-OH fibers the amount of initial absorption sites and the generation of color centers, especially the E'-centers, has been reduced in low-OH fibers as well. We studied the influence of this processing on the UV-performance of low-OH all-silica fibers. Besides the E'-centers at 214 and 229 nm, the concentrations of further defects at 245 nm, 265 nm and 330 nm became smaller, too. In addition, a further step of reduction takes place during additional UV-irradiation. After these two steps of improvements, the UV-transmission is in the same range compared to high-OH fiber. This UV-VIS-NIR-fiber shows a broadband transmission from 250 nm to 1.7 mu m wavelengths, using optimized parameters during the whole multiple-step manufacturing process.

38/3,AB/6 (Item 1 from file: 65)
DIALOG(R)File 65:Inside Conferences

03796357 INSIDE CONFERENCE ITEM ID: CN039893848
Improvements of Gamma-Induced Transmission Damage in Silica Fibers in the Deep UV-Region
Assmus, J.; Klein, K. F.; *Nelson, G."**; *Clarkin, J."**; Gutermuth, F. ; Kiefer, J.
CONFERENCE: International Conference on Ageing Studies and Lifetime Extension of Materials-1st
AGEING STUDIES AND LIFETIME EXTENSION OF MATERIALS, 1999; 1ST P: 635-646
New York, London, Kluwer Academic/Plenum Publishers, c2001
ISBN: 0306464772
LANGUAGE: English DOCUMENT TYPE: Conference Papers

region being formed from multiple tablets located adjacently within a silica tube. At least two tablets are present, differing in waveguide property. The tablets are prepared by a particle deposition process.

DETAILED DESCRIPTION - The fiber is prepared by locating the tablets within the tube and then heating to fuse both tablets and tube into a *preform"**.

Preferred Features: One type of tablet has a positive total dispersion and the other type a negative total dispersion, each within 0.5-20 ps/nm-km over the wavelength range 1520-1570 nm. *Optical"** attenuation of the *waveguide"** fiber is less than 0.25 dB/km.

USE - For telecommunication systems operating at high bit rates and incorporating multiple *channels"**, high-powered lasers, or optical amplifiers.

ADVANTAGE - Total dispersion product of a fiber length is controlled to meet a system link requirement so that fibers are interchangeable in that link.

DESCRIPTION OF DRAWING(S) - The figure shows the total dispersion varying along the waveguide fiber length.

pp; 30 DwgNo 1/30

20/3,AB/5 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI

010847203
WPI Acc No: 1996-344156/199635
XRPX Acc No: N96-289703

Optical filtering of noise-contaminated signal in wavelength division multiplex system - using optical path distances which differ by amount greater than half coherence length of noise by less than half coherence length of optical signal

Patent Assignee: NORTHERN TELECOM LTD (NELE)
Inventor: BYRON K C
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2297656	A	19960807	GB 951973	A	19950201	199635	B
US 5647037	A	19970708	US 96594471	A	19960131	199733	
US 5740290	A	19980414	US 96594471	A	19960131	199822	
			US 97800261	A	19970213		

Priority Applications (No Type Date): GB 951973 A 19950201
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2297656	A		11	H04B-010/06	
US 5647037	A		4	G02B-006/26	
US 5740290	A		4	G02B-006/26	Div ex application US 96594471 Div ex patent US 5647037

Abstract (Basic): GB 2297656 A

The method involves dividing the noise-contaminated signal into components which propagate different optical path differences before being recombined after refection in , or transmission through, spectrally selective optical filter elements which are spectrally matched with the spectral width of the *channel"**.

The difference in the optical path distances is great enough to preclude coherent recombination of noise power extending over the

spectral range of the filter elements while being small enough to provide near complete coherent recombination of the signal power. The division and recombination of the noise-contaminated signal is *preformed"** by 3dB *optical"** *waveguide"** couplers (20). Recombination is pref. effected after refection (24,25) in Bragg grating spectrally selective optical filter elements.

ADVANTAGE - Improved signal to noise ratio.

Dwg.2/2

Abstract (Equivalent): US 5647037 A

An *optical"** *waveguide"** transmission filter having a 3 dB single mode *optical"** *waveguide"** coupler provided, on one side of its coupling region, with a spectrally matched pair of retro-reflecting *optical"** *waveguide"** Bragg grating reflectors, one on each of the two limbs of the 3 dB coupler, wherein the difference in optical path distance from the coupling region of the 3 dB coupler to each of the two Bragg reflectors is greater than half the coherence length of a signal having a spectral width matched with that of the Bragg reflectors.

Dwg.2/2

20/3,AB/6 (Item 6 from file: 351)
DIALOG(R)File 351:Derwent WPI

010270587
WPI Acc No: 1995-171842/199523
XRAM Acc No: C95-079808
XRPX Acc No: N95-134680

Slip casting of silica glass *preform"** for drawing to optical fibre multi-connector - by forming slip contg. silica, casting in cylindrical plastic mould, solidifying, drying, de-moulding and heating

Patent Assignee: ALCATEL CABLE INTERFACE (COGE); MARS-ACTEL SA (MRAC)
Inventor: CAMPION J
Number of Countries: 007 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 652184	A1	19950510	EP 94402493	A	19941104	199523	B
FR 2712278	A1	19950519	FR 9313262	A	19931108	199525	
CA 2135256	A	19950509	CA 2135256	A	19941107	199532	
EP 652184	B1	19970115	EP 94402493	A	19941104	199708	
DE 69401484	E	19970227	DE 601484	A	19941104	199714	
			EP 94402493	A	19941104		
ES 2096426	T3	19970301	EP 94402493	A	19941104	199716	

Priority Applications (No Type Date): FR 9313262 A 19931108
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 652184	A1	F	6	C03B-019/12	
Designated States (Regional): DE ES FR GB IT SE					
CA 2135256	A	F		C03B-023/47	
EP 652184	B1	F	6	C03B-019/12	
Designated States (Regional): DE ES FR GB IT SE					
DE 69401484	E			C03B-019/12	Based on patent EP 652184
ES 2096426	T3			C03B-019/12	Based on patent EP 652184
FR 2712278	A1			C03B-019/02	

Abstract (Basic): EP 652184 A

Prodn. of a *preform"** for a silica glass multi-connector involves (a) preparing a slip contg. at least 50 wt.% synthetic silica of specific surface at least 40 sq.m./g. and an additive selected from at least 2 wt.% NH4F or NH4HF2 or max. 0.1 mole/1. HF acid; (b) casting the slip in a cylindrical plastic mould having removable internal rods of circular or diamond-shaped section at desired *preform"** *channel"** locations; (c) solidifying at room temp.; (d) drying for at least 8 hrs. at max. 60 deg. C; (d) demoulding; and (e) carrying out a densification heat treatment at 1300-1450 deg. C for 1-3 hrs. under vacuum or a He atmos..

Also claimed is a *preform"** obtained by the above process.

USE - In the mfr. of a multi-connector for connecting optical fibres together or to an *optical"** *waveguide"**.

ADVANTAGE - The process is reproducible, avoids the need for machining and gives a *preform"** with the requisite precision for drawing to a multi-connector with the desired dimensions.

Dwg.1/3

Abstract (Equivalent): EP 652184 B

A method of making a multi-ferrule blank out of silica glass, the blank being constituted by a silica glass part having a plurality of mutually parallel longitudinal *channels"**, and the method being characterised by the fact that it comprises the following operations: preparing a slip having at least 50% by weight synthetic silica with specific area of not less than 40 m2/g, and an additive selected from among ammonium fluoride, ammonium bi-fluoride at a concentration of not less than 2% by weight, or hydrofluoric acid at a concentration of not more than 0.1 moles per litre; casting said slip into a cylindrical mould made of plastics material and containing a plurality of removable rods of circular or lozenge section at the locations of said *channels"**; allowing to set at room temperature; drying for at least 8 hours at a temperature of not more than 60 degrees C; un-moulding; and applying densification heat treatment in the range 1300 degrees C to 1450 degrees for a period lying in the range 1 hour to 3 hours in a vacuum or in an atmosphere of helium.

Dwg.1/3

20/3,AB/7 (Item 7 from file: 351)
DIALOG(R)File 351:Derwent WPI

009074043
WPI Acc No: 1992-201462/199225
XRAM Acc No: C92-091611
XRPX Acc No: N92-152486
Planar *optical"** *waveguides"** mfr. for low loss - by stretching *preform"** to reduce dimensions and forming circuit pattern lithographically, for high, economic yield
Patent Assignee: CORNING INC (CORG)
Inventor: BHAGAVATULA V A; BHAGAVATULA V
Number of Countries: 011 Number of Patents: 013
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 490095	A2	19920617	EP 91119228	A	19911112	199225	B
US 5125946	A	19920630	US 90625153	A	19901210	199229	
AU 9188342	A	19920611	AU 9188342	A	19911202	199232	
CA 2053936	A	19920611	CA 2053936	A	19911022	199235	
TW 200442	A	19930221	TW 91109009	A	19911114	199329	

EP 490095	A3	19920902	EP 91119228	A	19911112	199338
AU 650922	B	19940707	AU 9188342	A	19911202	199431
AU 9474480	A	19950119	AU 9188342	A	19911202	199510
			AU 9474480	A	19941007	
AU 668320	B	19960426	AU 9188342	A	19911202	199624
			AU 9474480	A	19941007	
EP 490095	B1	19970917	EP 91119228	A	19911112	199742
DE 69127680	E	19971023	DE 627680	A	19911112	199748
			EP 91119228	A	19911112	
ES 2106757	T3	19971116	EP 91119228	A	19911112	199801
KR 267123	B1	20001002	KR 9122527	A	19911210	200134

Priority Applications (No Type Date): US 90625153 A 19901210
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 490095	A2	E	12	G02B-006/12	
Designated States (Regional): DE ES FR GB IT NL					
US 5125946	A		11	C03B-023/00	
AU 9188342	A			C03B-037/027	
CA 2053936	A			C03B-037/018	
TW 200442	A			C03B-019/00	
EP 490095	A3			G02B-006/12	
AU 650922	B			C03B-037/027	Previous Publ. patent AU 9188342
AU 9474480	A			C03B-037/027	Div ex application AU 9188342
AU 668320	B			C03B-037/027	Div ex application AU 9188342 Previous Publ. patent AU 9474480
EP 490095	B1	E	13	G02B-006/12	
Designated States (Regional): DE ES FR GB IT NL					
DE 69127680	E			G02B-006/12	Based on patent EP 490095
ES 2106757	T3			G02B-006/12	Based on patent EP 490095
KR 267123	B1			G02B-006/064	

Abstract (Basic): EP 490095 A

Prodn. comprises forming fused planar structure having first glass, and a second glass having a refractive index differing from that of the first glass. The thickness of the structure is reduced to form a cane of predetermined final dimension. Opt. material is removed from portion(s) and a region of additional material may be applied over that region. The second glass may be applied to the first by soot deposition, opt. into slots in the glass, or an optical fibre *preform"** may be located in the slots. Pref. the redn. in dimensions during thickness redn. is in the ratio 10:1-20:1; redn. is by heating and stretching. Selective removal of material is obtd. by lithography.

USE/ADVANTAGE - Passive components of inter-connection systems.

Dwg.6/13

Abstract (Equivalent): EP 490095 B

A process of manufacturing an elongate integrated optical device with at least one *channel"** waveguide in it, comprising: (a) forming an elongate fused glass structure of rectangular cross-section comprising a first glass (1) having a first refractive index; (b) removing material from at least one longitudinal portion of a surface of the elongate glass structure to form at least one longitudinally extending groove (14) in it; (c) placing in the at least one groove, at least one second glass (16,16') having a second refractive index which is higher than the first refractive index so as to provide at least one *channel"** waveguide in the device to be manufactured; and (d) heating and longitudinally stretching the resulting assembly to reduce the cross-section of it, thereby resulting in the elongate integrated

optical device with the at least one *channel"** waveguide in it.
Dwg.11a/16

Abstract (Equivalent): US 5125946 A
Glass blanks are mfd., by (a) forming a planar fused glass structure of first refractive index and at least a second glass of different refractive index; and (b) reducing its structure by stretching to form a planar optical cane of preselected final dimensions.
Pref. soot deposition techniques are used to apply second glass(es) to 1 or more side of first glass opt. in dimensional slots. Opt. second glass(es) comprises 1 or more optical fibre *preform"** which is placed into slot(s) in the first glass.
USE - In mfr. of planar *optical"** *waveguides"**.
Dwg.14/15

20/3,AB/8 (Item 8 from file: 351)
DIALOG(R)File 351:Derwent WPI

003943024
WPI Acc No: 1984-088568/198414
XRPX Acc No: N84-066215
Bubble free coating method for *optical"** fibre *waveguide"** - involves liq. continuum from reservoir surface through two dies causing air to be entrained in coating material
Patent Assignee: AT & T TECHNOLOGIES INC (AMTT); CRANE CO (CRAN); WESTERN ELECTRIC CO INC (AMTT)
Inventor: KASSAHUN B; VIRIYAYUTH M
Number of Countries: 007 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 8401227	A	19840329	WO 83US1245	A	19830815	198414	B
US 4439467	A	19840327	US 82418317	A	19820915	198415	
EP 118509	A	19840919	EP 83902854	A	19830815	198438	
JP 59501737	W	19841018	JP 83502942	A	19830815	198448	
US 4522148	A	19850611	US 84614897	A	19840529	198526	
CA 1211663	A	19860923				198643	
EP 118509	B	19870114				198702	
DE 3369119	G	19870219				198708	

Priority Applications (No Type Date): US 82418317 A 19820915; US 84614897 A 19840529
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 8401227	A	E	22		
Designated States (National): JP					
Designated States (Regional): DE FR GB NL					
EP 118509	A	E			
Designated States (Regional): DE FR GB NL					
EP 118509	B	E			
Designated States (Regional): DE FR GB NL					

Abstract (Basic): WO 8401227 A
The fibre is drawn down from a cylindrical *preform"** through a melting furnace and its dia. measured by a gauge is compared with the desired value in a system which controls the drawing rate accordingly. The protective coating is applied in a double-die appts. before the fibre passes through a centring gauge for coating treatment and outer

dia. measurement.

Pressurised flow of coating material enhances the pressure gradient in the first die, through which upward volumetric flow is sufficient to remove any bubbles by recirculating streamlines. Fluid exit *channels"** allow bubble-entrained coating material to leave the reservoir in the vicinity of the first die. This die has a precentring effect on the fibre, which is not misaligned by coalescent bubbles. (22pp Dwg.No.2/5)

EP 118509 A

A method of coating an elongated material to provide a substantially bubble-free covering, said method being characterised by the steps of: advancing the elongated material through a continuum of liquid coating material, which exists within a space enclosed by a free surface in a reservoir (46) open to the ambient surroundings and by the interiors of associated communicating first (54) and second dies (70), the elongated material's velocity causing air to become entrained in the coating material and the advancement of the elongated material being in a direction from the reservoir to the second die and causing a pressure gradient to be established between the reservoir and an exit orifice (78) of the second die with the pressure increasing from the free surface to a peak at a location before the exit orifice of the second die; causing coating material to flow into the vicinity of the exit orifice (55) of the first due at a pressure which sufficiently enhances the pressure gradient between portions of the first die and second die and which establishes sufficient volumetric flow of the coating material from a chamber (38) in the second die into the reservoir to cause the removal of bubbles from the elongated material and to cause the coating material in the chamber and on the coated elongated material to be substantially bubble-free; and removing bubble entrained fluid entering the reservoir through fluid exit means before the bubbles are able to grow and coalesce.

(12pp

Abstract (Equivalent): EP 118509 B

A method of coating an elongated material to provide a substantially bubble-free covering, said method being characterised by the steps of: advancing the elongated material through a continuum of liquid coating material, which exists within a space enclosed by a free surface in a reservoir (46) open to the ambient surroundings and by the interiors of associated communicating first (54) and second dies (70), the elongated material's velocity causing air to become entrained in the coating material and the advancement of the elongated material being in a direction from the reservoir to the second die and causing a pressure gradient to be established between the reservoir and an exit orifice (78) of the second die with the pressure increasing from the free surface to a peak at a location before the exit orifice of the second die; causing coating material to flow into the vicinity of the exit orifice (55) of the first due at a pressure which sufficiently enhances the pressure gradient between portions of the first die and second die and which establishes sufficient volumetric flow of the coating material from a chamber (38) in the second die into the reservoir to cause the removal of bubbles from the elongated material and to cause the coating material in the chamber and on the coated elongated material to be substantially bubble-free; and removing bubble entrained fluid entering the reservoir through fluid exit means before the bubbles are able to grow and coalesce.

Abstract (Equivalent): WO 8401227 A

The fibre is drawn down from a cylindrical *preform"** through a melting furnace and its dia. measured by a gauge is compared with the

desired value in a system which controls the drawing rate accordingly. The protective coating is applied in a double-die appts. before the fibre passes through a centring gauge for coating treatment and outer dia. measurement.

Pressurised flow of coating material enhances the pressure gradient in the first die, through which upward volumetric flow is sufficient to remove any bubbles by recirculating streamlines. Fluid exit *channels"** allow bubble-entrained coating material to leave the reservoir in the vicinity of the first die. This die has a precentring effect on the fibre, which is not misaligned by coalescent bubbles.

2/5

US 4522148 A

The fibre is advanced through a coating material, which extends from a free surface of a reservoir and through two dies that are arranged in tandem, at a velocity which causes air to be entrained in the coating material. A pressure gradient is established between portions of the first die adjacent to its exit orifice. One of the dies communicates with the reservoir and the second die and further communicates at the interface of the dies with a pressurised supply of the coating material.

The pressurised flow enhances the pressure gradient in the first die and establishes volumetric flow of coating material upwardly through the first die. The pressure gradient and flow rate cause any bubbles in the coating material on the advancing fibre to be removed by recirculating streamlines and to be moved upwardly into the reservoir.

ADVANTAGE - Prevents inclusion of bubbles

(9pp)

US 4439467 A

Process for coating optical fibres and similar materials comprises passing the fibre through a liq. coating compsn. under pressure (pref. about 40-80 N/cm2) and then through two dies, at a velocity such that air is entrapped in the coating material but then removed (together with excess coating liq.) on passing through the dies, by means of the pressure drop across the dies. (9pp

20/3,AB/9 (Item 9 from file: 351)
DIALOG(R)File 351:Derwent WPI

003463741
WPI Acc No: 1982-11683E/198206
*Optical"** *waveguide"** *preforms"** made by depositing glass on tube - flowing gas stream axially through tube to confine reactive vapour adjacent tube wall
Patent Assignee: CORNING GLASS WORKS (CORG)
Inventor: SARKAR A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4312654	A	19820126				198206 B

Priority Applications (No Type Date): US 80216556 A 19801215; US 78913754 A 19780608
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4312654	A		7		

Abstract (Basic): US 4312654 A

In prod. of an *optical"** *waveguide"** *preform"** by the chemical vapour deposition of glass on th inside wall of a glass tube from a reactive vapour mixt. flowing through the tube heated by an external moving source, the flow of the vapour mixt. is confined to an annular *channel"** adjacent the tube inner wall by flowing a gas (02, N2, A) axially through the tube. The gas flow is pref. effected through a tube extending into one end of the glass tube upstream of the hot zone, the tube being coupled to the external heat source.

Increased deposition rate of glass is provided

20/3,AB/10 (Item 10 from file: 351)
DIALOG(R)File 351:Derwent WPI

003456256
WPI Acc No: 1982-07909E/198204
Making *optical"** *waveguide"** *preforms"** - by vapour depositing glass generating water free flame in heated bait tube to improve deposition rate
Patent Assignee: CORNING GLASS WORKS (CORG)
Inventor: SARKAR A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4310340	A	19820112				198204	B

Priority Applications (No Type Date): US 80172068 A 19800724
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4310340	A		7		

Abstract (Basic): US 4310340 A

In the prodn. of an *optical"** *waveguide"** *preform"** by passing a reactant gas through a tube externally heated by a moving heat source to deposit glass on the tube, a tubular fuel burner located coaxially within one end of the tube upstream of the heat source generates a water free flame extending axially from the borner orifice through and downstream of the hot zone. The fuel for the burner may be CS2, SO2 or CO. The burner is pref. mechanically coupled to the external heat source to maintain a fixed relationship between them.

The burner flame confines the flow of reactants to an annular *channel"** adjacent the tube wall, increases the thermal gradient between the tube axis and wall and improves deposition rate and efficiency.

4

20/3,AB/11 (Item 1 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

06484764 References: 12
TITLE: FABRICATION OF HIGH CONCENTRATION RARE-EARTH-DOPED SILICA-BASED WAVEGUIDE BY MCVD METHOD
AUTHOR(S): WU B; CHU PL
CORPORATE SOURCE: UNIV NEW S WALES,SCH ELECT ENGN,OPT COMMUN GRP,POB

1/KENSINGTON/NSW 2033/AUSTRALIA/ (Reprint)
PUBLICATION: IEEE PHOTONICS TECHNOLOGY LETTERS, 1995, V7, N6 (JUN), P 655-657
GENUINE ARTICLE#: RC620
ISSN: 1041-1135
LANGUAGE: ENGLISH DOCUMENT TYPE: ARTICLE

ABSTRACT: In this letter, we report a technique of fabricating buried *channel"** silica-based *optical"** *waveguide"** containing the largest rare-earth concentration ever reported, i.e., 3 wt% in Nd2O3. Instead of the flame hydrolysis technique, these waveguides are manufactured by the standard MCVD method originally designed for fiber *preform"** fabrication.

20/3,AB/12 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

09744460 Supplier Number: 85222776
CHROMATOGRAPHY: Micropassages Reduce Frit Pack Pressure.
High Tech Separations News, v14, n11, pNA
April, 2002
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 413

20/3,AB/13 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

07643529 Supplier Number: 63511031
Polymers speed optical interconnects.(Technology Information)
Li, Yao
Electronic Engineering Times, p78
July 17, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1322

20/3,AB/14 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05247709 Genuine Article#: VK651 Number of References: 23
Title: CASCADE SELF-INDUCED HOLOGRAPHY - A NEW GRATING FABRICATION TECHNOLOGY FOR DFB/DBR LASERS AND WDM LASER ARRAYS (Abstract Available)
Author(s): LIN CH; ZHU ZH; QIAN Y; LO YH
Corporate Source: CORNELL UNIV,SCH ELECT ENGN/ITHACA//NY/14853
Journal: IEEE JOURNAL OF QUANTUM ELECTRONICS, 1996, V32, N10 (OCT), P 1752-1759
ISSN: 0018-9197
Language: ENGLISH Document Type: ARTICLE
Abstract: A method of fabricating submicron gratings for optoelectronic devices from a glass mask was proposed and demonstrated, The glass mask has gratings on both sides with a period of at least four times the

final feature size, By introducing an offset to the grating periods on the mask, one can achieve multiple-period gratings with a very fine period spacing for advanced wavelength-division multiplexing (WDM) devices. In this paper, we demonstrated 0.5-mu m second-order gratings for 1.55-mu m DFB lasers and gratings with a 6-Angstrom period difference for a four-*channel"** WDM laser array using only optical sources. The Moire pattern caused by the spatial frequency beating was also observed and discussed, The Moire pattern could serve as an effective tool to measuring wavelength *channel"** spacing between devices with an unprecedented (0.1 Angstrom) resolution.

20/3,AB/15 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

6835381 INSPEC Abstract Number: A2001-06-5240M-004
Title: Optical guiding of a radially polarized laser beam for inverse Cherenkov acceleration in a plasma *channel"**
Author(s): Serafim, P.; Sprangle, P.; Hafizi, B.
Author Affiliation: Dept. of Electr. Eng., Northeastern Univ., Boston, MA, USA
Journal: IEEE Transactions on Plasma Science vol.28, no.4 p.1190-3
Publisher: IEEE,
Publication Date: Aug. 2000 Country of Publication: USA
CODEN: ITPSBD ISSN: 0093-3813
SICI: 0093-3813(200008)28:4L.1190:OGRP;1-3
Material Identity Number: I251-2001-001
U.S. Copyright Clearance Center Code: 0093-3813/2000/$10.00
Language: English
Abstract: In a conventional inverse Cherenkov accelerator (ICA), the background neutral gas provides the necessary dispersion to maintain the synchronism between the drive laser and the accelerated electrons. A laser-driven ICA is susceptible to diffraction, and the acceleration length is limited to approximately a Rayleigh range (for a Gaussian beam). In this paper, an ICA configuration is proposed that avoids the laser diffraction limitation by employing a *preformed"** plasma *channel"**. It is shown that a radially polarized laser beam can be optically guided if the plasma density increases with radius-like r/sup 2/. Expressions for the guided axial and radial components of the laser field are derived, and a numerical example is discussed.
Subfile: A

20/3,AB/16 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

5814029 INSPEC Abstract Number: A9805-5240D-002
Title: Guiding of intense femtosecond pulses in *preformed"** plasma *channels"**
Author(s): Nikitin, S.P.; Antonsen, T.M.; Clark, T.R.; Li, Y.; Milchberg, H.M.
Author Affiliation: Inst. for Phys. Sci. & Technol., Maryland Univ., College Park, MD, USA
Journal: Optics Letters vol.22, no.23 p.1787-9
Publisher: Opt. Soc. America,

Publication Date: 1 Dec. 1997 Country of Publication: USA
CODEN: OPLEDP ISSN: 0146-9592
SICI: 0146-9592(19971201)22:23L.1787:GIFP;1-6
Material Identity Number: O053-98001
U.S. Copyright Clearance Center Code: 0146-9592/97/231787-03$10.00/0
Language: English
Abstract: We report guiding of sub-100-fs pulses at intensities up to 5*10/sup 15/ W/cm/sup 2/ over a distance of 1 cm in a *preformed"** plasma *channel"** . The width of the guided pulse was shortened, which we attribute to ionization-induced refraction at the *channel"** entrance. A pulse energy throughput of 30% in the lowest-order was measured.
Subfile: A

20/3,AB/17 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

03954176 INSPEC Abstract Number: A91108178, B91056926
Title: Silica waveguides on silicon and their application to integrated-optic components
Author(s): Kawachi, M.
Author Affiliation: NTT Opto-Electron. Lab., Ibaraki, Japan
Journal: Optical and Quantum Electronics vol.22, no.5 p.391-416
Publication Date: Sept. 1990 Country of Publication: UK
CODEN: OQELDI ISSN: 0306-8919
U.S. Copyright Clearance Center Code: 0306-8919/90/$03.00+.12
Language: English
Abstract: A marriage of optical fibre fabrication technology and LSI microfabrication technology gave birth to fibre-matched silica waveguides on silicon: thick glass layers of high-silica-content glass are deposited on silicon by flame hydrolysis, a method originally developed for fibre *preform"** fabrication. Silica *channel"** waveguides are then formed by photolithographic pattern definition processes followed by reactive ion etching. This high silica (HiS) technology offers the possibility of integrating a number of passive functions on a single silicon chip, as well as the possibility of the hybrid integration of both active and passive devices on silicon. This paper reviews the NTT HiS technology and its application to integrated-optic components such as optical beam splitters, optical switches, wavelength-division multi/demultiplexers and optical frequency-division multi/demultiplexers.
Subfile: A B

20/3,AB/18 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04880157
E.I. No: EIP97123949398
Title: Self-focusing and guiding of short laser pulses in ionizing gases and plasmas
Author: Esarey, Eric; Sprangle, Phillip; Krall, Jonathan; Ting, Antonio
Corporate Source: Naval Research Lab, Washington, DC, USA
Source: IEEE Journal of Quantum Electronics v 33 n 11 Nov 1997. p 1879-1914
Publication Year: 1997

CODEN: IEJQA7 ISSN: 0018-9197
Language: English
Abstract: Several features of intense, short-pulse (approximately less than 1 ps) laser propagation in gases undergoing ionization and in plasmas are reviewed, discussed, and analyzed. The wave equations for laser pulse propagation in a gas undergoing ionization and in a plasma are derived. The source-dependent expansion method is discussed, which is a general method for solving the paraxial wave equation with nonlinear source terms. In gases, the propagation of high-power (near the critical power) laser pulses is considered including the effects of diffraction, nonlinear self-focusing, ionization, and plasma generation. Self-guided solutions and the stability of these solutions are discussed. In plasmas, optical guiding by relativistic effects, ponderomotive effects, and *preformed"** density *channels"** is considered. The self-consistent plasma response is discussed, including plasma wave effects and instabilities such as self-modulation. Recent experiments on the guiding of laser pulses in gases and in plasmas are briefly summarized. (Author abstract) 216 Refs.

20/3,AB/19 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04162250
E.I. No: EIP95052708168
Title: Application of a plasma waveguide to soft-x-ray lasers
Author: Milchberg, H.M.; Durfee, C.G. III; Lunch, J.
Corporate Source: Univ of Maryland, College Park, MD, USA
Source: Journal of the Optical Society of America B: Optical Physics v 12 n 4 Apr 1995. p 731-737
Publication Year: 1995
CODEN: JOBPDE ISSN: 0740-3224
Language: English
Abstract: In this study the authors demonstrate that a *preformed"** plasma *channel"** is an ideal vehicle for compact, efficient soft x-ray lasers. The *channel"** mode structure is independent of the wavelength for wavelengths not too short. In addition to guiding an optical pump pulse the *channel"** also guides any generated x rays, eliminating the problem of refraction that has limited the length of soft-x-ray lasers produced form laser-solid target interactions. 23 Refs.

20/3,AB/20 (Item 1 from file: 103)
DIALOG(R)File 103:Energy SciTec

03815190 EDB-95-058958
Title: Electron acceleration in *preformed"** plasma *channels"** with terawatt CO[sub 2] laser
Author(s)/Editor(s): Pogorelsky, I.V.
Corporate Source: Brookhaven National Lab., Upton, NY (United States)
Sponsoring Organization: DOE; USDOE, Washington, DC (United States)
Publication Date: Feb 1995
(57 p)
Report Number(s): BNL-61482
Order Number: DE95008390
Contract Number (DOE): AC02-76CH00016
Language: English

Abstract: Extended cylindrical plasma *channels"** produced under gas breakdown by axicon-focused laser beams may be used as *optical"** *waveguides"** in laser-driven electron accelerators. Plasma *channeling"** of the laser beams will help to maintain a high acceleration gradient over many Rayleigh lengths. In addition, the rarefied gas density *channel"** produced after the optical gas breakdown, and followed by a plasma column expansion, reduces multiple scattering of the electron beam. A high-power picosecond C0[sub 2]laser operational at the ATF and being further upgraded to the 1 TW level is considered as the source for a plasma *channel"** formation and as the laser accelerator driver. We show how various laser accelerator schemes including beat wave, wake field, and Inverse Cherenkov accelerator benefit from using a *channeled"** short-pulse C0[sub 2]laser as a driver.

20/3,AB/21 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

15172171 PASCAL No.: 01-0336608
Production and characterization of a fully-ionized He plasma *channel"**
GAUL E W; LE BLANC S P; RUNDQUIST A R; ZGADZAJ R; MATLIS N H; LANGHOFF H; DOWNER M C
University of Texas at Austin, Department of Physics, Austin, Texas 78712
Journal: AIP conference proceedings, 2001-05-31, 569 (1) 105-111
Language: English
We report guiding of intense (I=1.3 +- 0.7x10 SUP 1 SUP 7 <hair thin space>W/cm SUP 2) 80 fs laser pulses with negligible spectral distortion through 1.5-cm-long *preformed"** helium plasma *channels"**. *Channels"** were formed by axicon-focused Nd:YAG laser pulses of either 0.3 J energy, 100 ps duration, after pre-ionizing a 200-700 Torr backfill of He gas to n SUB e similar 10 SUP 1 SUP 6 <hair thin space>cm SUP - SUP 3 with a pulsed electrical discharge; or 0.6-1.1 J energy, 400 ps duration, which required neither pre-ionization nor intentional impurities for seeding. Transverse interferometry showed that He was fully-ionized on the *channel"** axis in both cases. Identical fs pulses suffered substantial ionization-induced blueshifts after propagating through Ar and Ne *channels"** of similar dimensions. (c) 2001 American Institute of Physics.

20/3,AB/22 (Item 2 from file: 144)
DIALOG(R)File 144:Pascal

14947475 PASCAL No.: 01-0099247
Scaling of accelerating gradients and dephasing effects in *channel"** -guided laser wakefield accelerators : Laser and plasma accelerators
HUBBARD Richard F; SPRANGLE Phillip; HAFIZI Bahman
Beam Physics Branch, Plasma Physics Division, Naval Research Laboratory, Washington, DC 20375-5346, United States; Icarus Research, Inc., Bethesda, MD 20824-0780, United Kingdom
ICFA International Workshop, 2 (Kardamyli GRC) 1999-06-27
Journal: IEEE transactions on plasma science, 2000, 28 (4) 1122-1132
Language: English
Future wakefield accelerator (LWFA) experiments are expected to operate

in the short pulse resonant regime and employ some form of laser guiding, such as a *preformed"** plasma *channel"**. Performance of an LWFA may be characterized by the maximum axial electric field E SUB m , the dephasing length L SUB d , and the corresponding dephasing limited energy gain W SUB d . Dephasing is characterized by the normalized phase slippage rate DELTA beta SUB p of the wakefield relative to a particle moving at the velocity of light. This paper presents analytical models for all of these quantities and compares them with results from simulations of *channel"**-guided LWFAs. The simulations generally confirm the scaling predicted by the analytical models, agreeing within a few percent in most cases. The results show that with the proper choice of laser and *channel"** parameters, the pulse will propagate at a nearly constant spot size tau SUB M over many Rayleigh lengths and generate large accelerating electric fields. The spot size correction to the slippage rate is shown to be important in the LWFA regime, whereas DELTA beta SUB p is essentially independent of laser intensity. An example is presented of a 25-TW, 100-fs laser pulse that produces a dephasing limited energy gain in excess of 1 GeV.

20/3,AB/23 (Item 3 from file: 144)
DIALOG(R)File 144:Pascal

14278954 PASCAL No.: 99-0483909
High efficiency coupling and guiding of intense femtosecond laser pulses in *preformed"** plasma *channels"** in an elongated gas jet
NIKITIN S P; ALEXEEV I; FAN J; MILCHBERG H M
Institute for Physical Science and Technology, University of Maryland, College Park, Maryland 20742
Journal: AIP conference proceedings, 1999-07-12, 472 (1) 434-443
Language: English
We report coupling and guiding of pulses of peak power up to 0.3 TW in 1.5 cm long *preformed"** plasma waveguides generated in a high repetition rate argon gas jet. Coupling of up to 52% was measured for 50 mJ, -110 fs pulses injected at times longer than 20 ns, giving guided intensities up to -5x10 SUP 1 SUP 6 <hair thin space>W/cm SUP 2 . It was found that for short delays between waveguide generation and pulse injection, pulse shortening occurred, with this effect reduced as delay was increased. Injection into the waveguide of two consecutive pulses separated by a few nanoseconds resulted in the reduction of shortening of the second pulse at all delays. Femtosecond time-resolved shadowgrams of the coupling of injected pulses into the waveguide show that there is similar 0.5 mm of neutral gas remaining at the waveguide entrance after waveguide generation. (c) 1999 American Institute of Physics.

20/3,AB/24 (Item 4 from file: 144)
DIALOG(R)File 144:Pascal

14215140 PASCAL No.: 99-0415950
Non-oxide glass waveguides
Rare-earth-doped materials and devices III : San Jose CA, 27-28 January 1999
ADAM J L; LUCAS J

SHIBIN JIANG, ed; HONKANEN Seppo, ed
Laboratoire des Verres et Ceramiques, UMR-CNRS 6512, Universite de Rennes 1, Campus de Beaulieu, 35042 Rennes, France
International Society for Optical Engineering, Bellingham WA, United States.
Rare-earth-doped materials and devices. Conference, 3 (San Jose CA USA) 1999-01-17
Journal: SPIE proceedings series, 1999, 3622 32-43
Language: English
The chemical compositions, characteristic temperatures and optical transmission spectra of fluoride and chalcogenide glasses are presented. The various techniques used in the preparation of *preforms"**, *optical"** fibers, and planar *waveguides"** are reviewed. Details are given on the application of rare-earth-doped fluoride glass fiber lasers, which operate at discrete wavelengths from the UV to the mid-IR. The performances of fiber amplifiers for telecommunication are reviewed as well. Because of a broad transmission range in the mid-IR, chalcogenide glasses are suitable for various passive applications. Experimental results on laser power delivery, radiometry and remote chemical analysis by means of chalcogenide fibers are reported.

20/3,AB/25 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01651010 AAD9836380
HYDRODYNAMICAL AND *OPTICAL"** PROPERTIES OF THE PLASMA *WAVEGUIDE"** (MODE COUPLING, ELECTRON DENSITY PROFILES)
Author: CLARK, THOMAS RAPHAEL, JR.
Degree: PH.D.
Year: 1998
Corporate Source/Institution: UNIVERSITY OF MARYLAND COLLEGE PARK (0117)
Source: VOLUME 59/06-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 2832. 180 PAGES

The linear optical guiding properties of the laser-produced plasma waveguide were experimentally investigated. Time and space resolved interferometry measurements of the electron density profile allowed the determination of the *channel"** size, depth, and the local uniformity of the guide. This information was used to completely characterize the guiding of moderate intensity laser pulses injected into the guide, where moderate intensity is defined as below the threshold for further ionization of the *preformed"** plasma. The observed guided intensity profiles of end-coupled and tunnel-coupled pulses compared favorably with calculations of the quasi-bound modes based on the measured electron density profiles. For end-coupling, quasi-bound mode selection was determined by the input beam size and coupling angle with no observed frequency selection. This was in contrast to the frequency and angle selective tunnel coupling. For a given spectrum of allowed quasi-bound modes, end-coupling tended to select lower order modes while tunnel-coupling selected the highest available.

Detailed time- and space-resolved electron density measurements were made on the plasma *waveguide"**. A density depression suitable for *optical"** guiding was observed to develop within the first few hundred picoseconds after plasma creation, during which rapid cooling occurred. At longer times the plasma expansion closely followed that of a cylindrical